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Products, News & Information Data Centers Can Trust. Since 1979

Steelcape Pushes Network Envelope

Unique Tunneling Technology Helps To Secure, Optimize Network Traffic

by Christian Perry

• • •

Despite its power and seemingly unending flexibility, TCP/IP (Transmission Control Protocol/Internet Protocol) continues to display an inherent lack of security, an aspect that leaves plenty of industry room for improvement and innovation. One company that's taking advantage of this opportunity to ramp up network security is Steelcape, which has developed an alternative to TCP/IP.

"The general security industry has lacked innovation," says Dean Norman, vice president of sales for Steelcape. "We made the decision to take a different approach, instead of focusing on the weaknesses of TCP/IP and how to fix it, firewall protection, port scanning, etc."

Instead of trying to fit a bandage on the popular protocol, Steelcape set out to build a secure communication model that isn't hampered by the limitations or shortfalls of TCP/IP. Enterprises can use the Steelcape protocol library to replace elements of their existing TCP/IP protocol stacks or even supplement their existing stacks.

Sturdy Security

Thanks to a blend of computing algorithms and packet manipulation, the Steelcape solution can set and change protocol ports on a firewall without actually opening those ports. In fact, enterprises using the technology can eliminate the TCP/UDP (Transmission Control Protocol/User Datagram Protocol) transport layer altogether, which the company says can decrease CPU cycles by an estimated 25% and improve network performance up to 40%.

"Our communication protocol travels unhindered by the firewall; thus, it is extremely secure—so secure that our initial early clients requested an enhanced version to offer reports, or goggles that can see the invisible man, if you will," Norman says. "Besides reporting, the Enterprise Server is needed to configure our Agents to decrypt the data and build segregation zones."

The Steelcape Enterprise Server provides complete administration of the protected network, including control and monitoring of Steelcape components, such as Agents. The server also gathers and reports critical data, including the time at which the connection is established; identities or addresses of the computers establishing the connection; the number of connection attempts; the time at which the connection is closed; and the amount of data transacted.

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The Buzz Around Windows Server 2008 Beta 3

Latest Release Adds New Functionality & Improved Performance

by Paul Ferrill

• • •

Microsoft has decided on the name Windows Server 2008 for the final version of what has been known as Longhorn Server up to this point. The Beta 3 release will be the final test version before the RTM (release to manufacturing) sometime in the second half of this year. Beta 3 includes a number of new features and performance improvements to previous releases.

You'll need a Windows Vista workstation to take full advantage of some of the new features in Windows Server 2008, including features such as native IPv6 support and NAP.

Microsoft (www.microsoft.com) is pushing Windows Server 2008 as the perfect complementary server to go along with Windows Vista workstations. You'll need a Windows Vista workstation to take full advantage of some of the new features in Windows Server 2008, including features such as native IPv6 support and NAP (Network Access Protection).

Key Themes

Microsoft is pushing three key areas as the benefits of Windows Server 2008. These include more control, greater flexibility, and increased protection. Each area addresses what the company sees as customer pain points when dealing with the management and operation of a server. The proliferation

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■ **A10 Networks** announced its AX Series application acceleration switches, designed to help enterprises maximize application availability. ■ **Adder** released AdderLink ipeps, a program for high-performance KVM over IP. ■ **Apani Networks** announced EpiForce 3.0, the latest version of the company's security software. ■ **Aten's** new KH98 is an 8-port KVM switch that offers IPMI 2.0 monitoring from a single point. ■ **Mazu Networks** released a new Mazu sensor that promotes network visibility on 10Gbps networks. ■ **Mellanox Technologies** released ConnectX EN Dual-Port 10Gigabit Ethernet adapter chips and NICs. ■ **Para Systems** released two new Minuteman EnSpire Standby UPS systems: the EnSpire EN400 and EnSpire EN600. ■ **Portwell Technology** announced the NAR-5530, a network security appliance server in a 1U rackmount form factor. ■ **Stampede Technologies** released Stampede Multi-User Client software to provide an alternative to installing and administering hardware at remote locations or installing client software on every remote device. ■ **Stratus Technologies** announced the ftScalable Storage system with up to 10.8TB of data storage.

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☐ 10 to 99 ☐ 500 to 999
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☐ Bi-weekly ☐ Annually
☐ Monthly ☐ No Involvement

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SECURITY

JUNE 8, 2007

Management Platform Turns Data Into Intelligence

RSA enVision Helps SMEs Achieve Log Management Success

MANAGING SECURITY and compliance data is critical for today's enterprises. RSA, a division of EMC, says new capabilities for its RSA enVision Compliance and Security Information Management platform are designed to help companies manage their compliance and security data, namely security and compliance event log information.

RSA's enVision platform provides users with the ability to turn compliance and security event log data into meaningful business intelligence information. This information can be critical; both in terms of helping administrators recognize potential security problems, and also meeting compliance requirements. Compliance requirements include, for example, required retention times for event log information.

The enVision platform now provides a life cycle management platform for this type of information, from its inception to its elimination.

As designed, the RSA enVision platform works with devices and platforms from a wide variety of vendors, including Cisco Systems, Microsoft, CipherTrust, Symantec, and many others, providing a management layer over the security and event log information collected by these various devices and/or platforms.

Other features include the use of RSA's Internet Protocol Database to collect event log information, availability of an enVision appliance-based product, and Universal Device Support, which lets users add new event log source devices as needed.

One key feature added to the enVision platform is the introduction of enhanced availability collection server configurations. Essentially, this means that in case of collection server failure, a backup component in "hot standby" mode detects the problem and automatically assumes collection duties. This ensures that the collection of security and compliance event log data continues even in unexpected component failures. This is important for meeting compliance requirements that demand continuous collection and life cycle management.

RSA enVision

Pricing depends on the number of devices companies are collecting from and the applications

Helps organizations collect, store, manage, and make sense of security and compliance log information

(781) 375-9340

www.Processor.com/enVision

RSA
The Security Division of EMC

STORAGE

JUNE 8, 2007

Compresses, Encrypts, Monitors & Secures SQL Server Backups

Red Gate Announces SQL Backup 5.0 With New Features

BACKING UP A SQL DATABASE can be one of the most conflict-ridden, yet vital tasks any IT manager must deal with in his career. Red Gate Software's SQL Backup program is widely considered to be a leader in a competitive industry for tools that simplify backing up SQL data. With five iterations under its belt, the Red Gate development team has created a software utility for data center managers from any small to medium-sized enterprise to easily create secure SQL backups fast.

During development of SQL Backup 5.0, the Red Gate team asked IT managers and database admins from around the world what they would like to see in the new version. Overwhelmingly, users asked for an interactive way to visualize whether backup jobs would run smoothly or incur conflicts.

In direct response to their plea, Red Gate has integrated an innovative timeline planning system into SQL Backup 5's new GUI. Color-coding in the timeline lets users identify, monitor, and configure backup activities at a glance, while zooming in and out of the timeline enables easy viewing of backup activities across several days or even minutes. If users need to manage SQL Servers in different time zones or locations throughout the world, tabs can be set up on the timeline for tracking activities, even if they run several hours apart. SQL Backup is renowned for its high performance, with an ability to compress native SQL Server backup files by up to 95%. In SQL Backup 5, Red Gate has added a variety of throughput and compression enhancements to optimize backups and improve performance still further.

Knowing pricing concerns are always a determining factor, Red Gate has set a transparent pricing structure. The product is priced as one license per server, regardless of the number of instances of SQL servers running on it or whether it is a multiprocessor server.

Red Gate Software SQL Backup 5.0

Lite Edition: $195

Standard Edition: $395

Pro Edition: $695

Simplifies the process of creating and securing an enterprise's SQL Server backups while also saving time, space, and money

(866) 733-4283

www.Processor.com/SQL-Backup

red-gate® software

SERVER APPLIANCE

JUNE 8, 2007

Self-Contained Policy Enforcement Protects Email

Mirapoint's RazorGate Appliance Cuts Spam At The Perimeter

MIRAPOINT'S RAZORGATE email security appliance is intended to help mitigate risks associated with email. The rack-mountable RazorGate employs Mirapoint's Embedded Policy Engine, which works by enforcing recipient validation and recipient-based policies without the need to query the corporate directory through the firewall for each message. So admins can disable external access to their corporate directories. Directory technologies supported include Active Directory, Domino, eDirectory, and LDAP. A flexible filtering action list includes archive, silent wiretap, redirect, quarantine, and blocking based on keywords, message attributes, and attachment contents.



The MailHurdle connection management technology rejects up to 80% of spam at the network's edge. Zero-hour virus protection is provided via a combination of a traditional signature-based virus engine coupled with Mirapoint's RAPID Anti-Virus engine. Other security features include a personal Junk Mail Manager as well as an administrative quarantine queue for managing inbound and outbound messages. The quarantine facility lets admins inspect messages before deciding to deliver, redirect, or reject them.

The RazorGate's hardened OS uses best security practices; only ports and services to support the routing and hygiene of mail are enabled.

The RazorGate offers load balancing and centralized management capabilities. An easy-to-use Web-based management console lets admins configure the system, monitor operations, and produce reports. RazorGate also provides standard remote monitoring tools, including email alerts and SNMP. The RazorGate is available in three configurations: the RG100, RG350, and RG500.

Mirapoint RazorGate (RG500 model shown)

Starts at $5,250

Autonomous email security appliance enforces centrally managed email policies without tying up traditional network resources

(800) 937-8118

www.Processor.com/RazorGate

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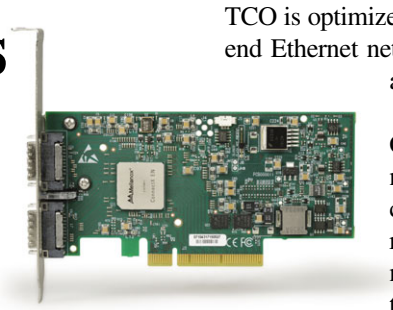
COMPONENTS

MAY 25, 2007

More Bandwidth, Decreased CPU Loads

Mellanox ConnectX EN Ethernet NICs Ideal For Performance-Driven Server & Storage Needs

MELLANOX CONNECTX EN Ethernet NICs deliver high-bandwidth and industry-leading 10 Gigabit Ethernet connectivity with stateless offloads for performance-driven server and storage applications in high-performance computing and enterprise data center environments. Web infrastructure and IP video servers are two applications that will achieve significant throughput improvements resulting in faster access and increased number of users per server.



ConnectX EN improves network performance by increasing available bandwidth while decreasing the associated transport load on the CPU and providing enhanced performance, especially in virtualized server environments.

ConnectX EN removes I/O bottlenecks that limit application performance. Hardware-based stateless offload engines handle the TCP/UDP/IP segmentation, reassembly, and checksum calculations that would otherwise burden the host process. TCO is optimized by maintaining an end-to-end Ethernet network on existing OSes and applications.

The dual-port 10GBASE-CX4 adapter enables connectivity over 20+ meters of copper cables satisfying in-rack and rack-to-rack connections. For longer distances, single- and dual-port 10GBASE-SR adapters support up to 300 meters over multimode fiber, while the 10GBASE-LR adapters support up to 10km over single-mode fiber. Both fiber adapters use XFP modules provided by Mellanox.

Benefits

- I/O consolidation
- 10 Gigabit full duplex bandwidth
- Virtualization acceleration
- High-performance networking and storage access

Mellanox ConnectX EN Ethernet NIC

Increases available bandwidth and provides enhanced performance, especially in virtualized server environments

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Mellanox® TECHNOLOGIES

MarketPlace NEWS



Avaya Could Be For Sale

Telecommunications company Avaya is exploring its options to sell a portion or all of itself. Credit Suisse, an investment bank, is serving as Avaya's adviser. The company is valued at $6.1 billion and reportedly has three suitors: Cisco, Nortel Networks, and Silver Lake Partners. Avaya, which has about 20,000 employees, makes phone equipment for businesses and was once owned by AT&T and Lucent before being spun off into its own entity.

CDW To Be Acquired

Online computer retailer CDW has agreed to be acquired by Chicago-based private equity firm Madison Dearborn Partners. The firm will pay about $7.3 billion, or $87.75 per share, in cash for CDW—a more than 16% premium over CDW's most recent stock price prior to the announcement. CDW has been soliciting purchase offers for several weeks and has until late June to actively solicit other offers before finalizing the deal with Madison Dearborn Partners. CDW expects to close the deal by the fourth quarter and, as part of the deal, will not declare an annual dividend for 2007.

Google, DoubleClick Deal Investigated

The Federal Trade Commission has begun its antitrust investigation into the merger of search giant Google and online advertising company DoubleClick. In April, Google announced its intent to purchase DoubleClick for $3.1 billion cash. The deal immediately caused concern among privacy advocates, including the Electronic Privacy Information Center and the Center for Digital Democracy, which said the deal would give the combined company access to "more information about the Internet activities of consumers than any other company in the world." The FTC investigation is now in preliminary stages; within the next few weeks, the FTC will decide whether to escalate the investigation to a second request for information.

CA Posts Loss

CA had revenue of more than $1 billion during the most recent quarter, but the company posted a net loss of $20 million. Much of the loss was caused by $100 million in restructuring and related costs. CA recently completed a round of 1,700 job cuts, and CA CFO Nancy Cooper says the company still has room to make "additional efficiencies" with the possibility of more restructuring, particularly overseas. During the last quarter, the company's earnings per share were up 7% to 20 cents a share. CA expects fiscal year 2008 revenue to be between $4.05 billion and $4.10 billion, with earnings per share of between 94 and 98 cents.

Google, Yahoo! Increase Search Market Share

According to Nielsen/NetRatings, during the month of April, both Google and Yahoo!'s search engines increased their market share, while Microsoft lost ground for the first time in a few months. Following the trend of late, Google saw its share of the search market increase 1.5% from 53.7% in March to 55.2% in April. Yahoo!'s share grew 0.1%, up to 21.9% from 21.8% in March. Meanwhile, Microsoft's share slid 1.1% from 10.1% to 9%. According to Nielsen/NetRatings, America Online stayed in fourth place, with its market share slipping 0.4% from 5.8% to 5.4%, and Ask.com remained unchanged at 1.8%, in fifth place.

Lenovo Posts Profit

Lenovo has posted losses in the United States for the past three quarters, but the company announced that its fourth fiscal quarter has turned a profit. For the quarter that ended March 31, Lenovo reported $3.4 billion in revenue, which is an increase of 9% over last year's revenue of $3.1 billion. Fourth-quarter profit was $60 million this year, compared to a loss of $116 million in the same quarter last year. The company also reported notebook shipments increased 29% during the past year.

Charges Against CA Dismissed

CA says it has complied with a September 2004 deferred prosecution agreement. As a result, all pending charges against CA have been dismissed by U.S. Judge I. Leo Glasser, according to the company. The agreement, which required the company to cooperate with government investigations and work toward preventing future fraud, was offered after CA was charged with obstruction of justice and securities fraud after covering up false software licensing revenues that were recorded prematurely. Former CA executives were also charged in criminal cases, resulting in jail time and hefty fines for some.

Vendors & Customers Disagree On Customer Service Quality

A recent study revealed IT executives believe the customer service their companies offer is higher quality than what their customers think it is. Accenture surveyed 12 services executives at large IT firms and 1,200 of those companies' customers. It found more than half of the execs said satisfaction rates for their firms' customer services were above average and their customer-service capacities were among the top in the industry. However, of the customers polled, the majority believed the customer service they were receiving from those companies was average to below average. The survey also showed IT execs are looking to cut costs by increasing self-service initiatives while customers want more personalized attention.

Online Ad Spending On The Rise

According to a study by the Interactive Advertising Bureau, 2006 saw a record amount of spending for online advertisers in the United States. The report shows an increase of 35% from 2005 to 2006 for a total of $16.9 billion spent last year. The report also shows that 52% of online ad revenue last year was from consumer-related advertising. Other findings concluded that 40% of online ad revenue was revenue from search engine advertising, and 32% was generated by display advertising. The same upward trends were found in a report recently released by Forrester Research.

Worldwide Server Shipments Up

For this year's first quarter, worldwide shipments of servers topped 2.1 million, showing growth of 6% over the same quarter last year, according to Gartner. Likewise, worldwide server revenues for the quarter increased 4.5% year over year, totaling $12.9 billion. In terms of server revenue, IBM led the pack in market share for the quarter with 29.8%, followed by HP with 28.2% and Dell with 11.2%. However, for server shipments, HP was first with market share of 30%, followed by Dell with 21.2%, and then IBM with 14%.

Patent Overhaul Bill Approved

A bill that would overhaul the U.S. patent system has recently been approved by a Congressional subcommittee. The next step for the Patent Reform Act will be to move on to the full committee after its approval by the House Judiciary Committee's Subcommittee on Courts, the Internet, and Intellectual Property. Several objections were raised against the bill by members of the subcommittee. Among concerns are the limits placed on damages when the patent in question is part of a larger product. If approved, the bill would also change the current patent-award system to first-to-file instead of the current first-to-invent.

IBM Buys Back Shares

To increase its original 2007 earnings per share forecast from 11% to between 13% and 14%, IBM paid $12.5 billion to buy back 118.8 million shares, or 8% of its outstanding shares. The company used $1 billion cash and borrowed $11.5 billion from three different banks to pay for the repurchase. According to IBM, the stock buyback should result in a boost of 14 to 17 cents per share for the revised forecast. In April IBM said it planned to implement a buyback plan that would amount to the company repurchasing $15 billion of its shares.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	May 22 $	May 30 $	% change from previous week
Avaya	AV	$11.31	$13.88	$15.66	▲ 12.82%
BEA Systems	BEAS	$11.76	$12.16	$12.63	▲ 3.87%
Computer Associates	CA	$21.42	$28.13	$26.38	▼ 6.22%
Cisco Systems	CSCO	$19.48	$26.37	$26.40	▲ 0.11%
Dell	DELL	$24.89	$26.38	$26.22	▼ 0.61%
Electronic Data Systems	EDS	$23.77	$28.43	$28.65	▲ 0.77%
Google	GOOG	$381.54	$475.86	$498.60	▲ 4.78%
HP	HPQ	$29.87	$45.58	$45.67	▲ 0.2%
IBM	IBM	$77.02	$106.70	$106.93	▲ 0.22%
Intel	INTC	$16.86	$22.99	$22.08	▼ 3.96%
McAfee	MFE	$23.15	$34.64	$36.09	▲ 4.19%
Microsoft	MSFT	$21.71	$30.69	$31.11	▲ 1.37%
Oracle	ORCL	$13.25	$19.37	$19.42	▲ 0.26%
Red Hat Software	RHT	$26.05	$23.28	$22.95	▼ 1.42%
Sun Microsystems	SUNW	$4.11	$5.38	$5.12	▼ 4.83%
Symantec	SYMC	$15.63	$19.63	$19.77	▲ 0.71%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Upcoming IT Events

- JUNE -

ICCA National Conference
June 8-10
Chicago, Ill.
www.icca.org/confinfo_june2007.asp

CSI NetSec 07
June 11-13
Scottsdale, Ariz.
www.gocsi.com

Gartner IT Infrastructure, Operations & Management Summit
June 11-13
Orlando, Fla.
www.gartner.com/2_events/conferences/str23.jsp

Storage World Conference 2007
June 12-14
Long Beach, Calif.
www.storageworldconference.com

Symantec Vision 2007
June 12-14
Las Vegas, Nev.
www28.cplan.com/vision2007/index.jsp?a=35742

Detroit ITEC 2007
June 13-14
Detroit, Mich.
www.goitec.com

HP Technology Forum & Expo 2007
June 18-21
Las Vegas, Nev.
www.hptechnologyforum.com

InfoComm07
June 19-21
Anaheim, Calif.
www.infocommshow.org/html

Seattle ITEC 2007
June 20-21
Seattle, Wash.
www.goitec.com

Indianapolis ITEC 2007
June 27-28
Indianapolis, Ind.
www.goitec.com

- JULY -

SANSFIRE 2007
July 25-August 3
Washington, D.C.
www.sans.org

- AUGUST -

National Institute of Governmental Purchasing
August 4-8
Hartford, Conn.
www.nigp.org/Events/Forum.htm

LinuxWorld Conference & Expo
August 6-9
San Francisco, Calif.
www.linuxworldexpo.com

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SIX QUICK TIPS

Watch Out For These Oft-Neglected Areas Of Data Center Maintenance

by Drew Robb

• • •

System administrators and IT managers face rapid expansion in areas such as raw processing power, application load, and disk capacity. Yet they are often tasked to cope with this burden despite budget cutbacks and a shortage of personnel. It's no surprise, then, that some data center maintenance actions simply don't get done. Yet such actions may come back to bite them in the long run.

Face Up To It

The most basic tenet of data center maintenance is that it must be performed. Just like oil changes, water levels, and tire pressure checks in cars, it pays to stay on top of the "little things" that can create havoc in expensive machinery. Yet many small computer room and data center operators avoid it. They just don't want to have to deal with the pain involved in planned outages—an outcry from management, complaints from a line of business heads, and demands to "find some other solution, but keep everything online." As a result, they may decide to forgo doing any maintenance at all and "go on hoping." These are vain hopes, however, as failures are inevitable.

The best approach, therefore, is to be upfront about the necessity for conducting regular maintenance. Work out a program to carry out and send it around for comments.

"Avoid skipping maintenance by creating a formal plan with planned outages and distribute it for company-wide understanding," says Peter Sacco, president of PTS Data Center Solutions (www.ptsdcs.com). "Additionally, overall site availability can be maintained by contracting a consulting company to provide site assessment services on an annual, biannual, or quarterly basis."

Such a site assessment would include architectural, electrical, mechanical, fire protection, physical security, and monitoring systems.

Power Neglect

One area in particular that merits dependable maintenance is the power infrastructure. It's been stated that there is no IT without electricity. The backbone of the data center is the power infrastructure. Therefore, it deserves the lion's share of attention.

Ensuring the proper operation of the power system and its ability to deliver power when and where it is needed will maximize availability. Power maintenance should include preventive maintenance on UPS systems, battery service (and scheduled replacement of batteries), and thermal imaging of load panels.

"Maintenance of the main incoming building electrical service switchgear and the corresponding downstream electrical components appear to have the most neglect," says Mark Levin, a partner at Metrics Based Assessments (www.metricsbasedassessments.com). "The reason for this neglect is that interruptions and/or transfer of electrical load to an emergency generator supply must occur to perform the necessary work."

Document It

Just about every facility has a one-line diagram that acts as the roadmap of power flow through a facility. However, as equipment changes over time or power infrastructure enhancements are made, updating this document is often overlooked. Yet during a critical failure, this is often one of the first places engineers will look to identify the potential source of the problem.

Consequently, organizations should either allocate more time to maintain these documents or call in outside help to do so.

"Data center managers should work with providers that offer both one-line verification, as well as a one-line update for the data center," says A.J. Groeber, marketing communications manager at Emerson Network Power's Service Business (www.Processor.com/Emerson-Liebert). "These documents are essential for documenting, troubleshooting, and communicating information about your power systems."

Be Cool

While power has always been important, cooling has risen greatly in prominence in recent years. Thus, maintenance of cooling components must also be carried out efficiently.

"Most basic maintenance should focus on the areas of the highest probability of failure—power and cooling," says Sacco. "Cooling maintenance should include regular inspections of the evaporator and heat-rejection equipment, as well as regular checking of the operating modes and cooling effectiveness.

Further, Sacco suggests that regular checks be done to make sure standard cooling best practices are being adhered to. This encompasses such points as following a hot-aisle/cold-aisle layout and making sure cabinet gaps are filled using blanking plates and all raised-floor cable cut-outs are sealed to prevent bypass airflow.

Infrared Inspection

Data center and facility managers should consider an infrared inspection as part of a planned maintenance program. It can be a useful and practical tool for identifying defective components and other conditions that could result in a fire or electrical breakdown. Typically, traditional maintenance activities do not uncover these types of problems, and most go undetected until there is an operating failure. Such failures can cause extensive damage resulting in significant business interruption and financial losses. The infrared testing works by identifying system hot spots using thermographic imaging.

"Hot spots are indicative of poor connections, corrosion, or overload—ideal situations for a system failure," says Groeber. "By identifying these in advance, you can proactively correct potential failures, significantly increasing system availability."

Watch That Capacity

Capacity planning is a smart way to avoid last-minute headaches or heroic troubleshooting after a mission-critical system goes down. It represents a way to schedule maintenance activities properly by taking care of matters such as hard drive expansion, CPU upgrades, and adding RAM before bottlenecks take place. By implementing capacity management, IT staff can often gain the time they need to perform other routine maintenance activities.

Capacity planning begins with collection of performance and capacity data, which can then be analyzed in detail to build a baseline view of the current infrastructure. With this in hand, the organization can better understand existing business plans and their potential impact on the existing IT infrastructure.

"Capacity planning highlights any shortfalls based upon the prediction of future resource needs," says Ron Potter, manager of best practices at TeamQuest (www.Processor.com/TeamQ). "It can tell you in advance if a server is going to run out of memory or processing power and how much storage capacity the organization needs to be purchasing now in order to maintain service levels."

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The This Week's Issue page separates articles by section, including Cover Focus, or "feature" articles about a particular data center-related subject; Tech & Trends, which is an assortment of articles covering various issues of concern; and Featured Products, which contain overviews of new products that recently hit the market.

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STORAGE

JUNE 8, 2007

Protecting Your Exchange Server

When Email Goes Down, Heads Will Roll

EMAIL IS THE MOST widely used online application for most companies. The average business user sends and receives 137 emails per day. When email goes down, businesses lose money.

Using traditional technologies to recover a single email message can take hours, and rebuilding an entire email server can take a day or longer. Now, one company has solved the data protection problems of the past and at a new low price point.

NetMass offers the ServerSafe Remote Backup service, which makes backup and recovery easier, faster, and more reliable. ServerSafe replaces tape-based backup with an automated online solution that provides centralized backup of Exchange, file, and application/database servers.

With one easy solution, your data is backed up to professionally managed data centers that are disaster-hardened, temperature-controlled, highly secure, and offer exceptional business continuity.

ServerSafe can back up virtually all types of data, including live SQL, MySQL, and PostGreSQL databases, but a popular feature of the service is backing up email servers such as Exchange and Lotus Notes/Domino and applications such as Outlook.

ServerSafe features include:

Continuous data protection. With conventional backup, an Exchange database gets backed up once daily or weekly. ServerSafe features a CDP module that continuously monitors the specified data source and automatically backs up changed data offsite. CDP effectively removes the data loss vulnerabilities between scheduled backups by allowing users to restore data from any point in time. With ServerSafe, CDP is integrated and not an add-on to be purchased, installed, and maintained.

Speedy restores. ServerSafe offers extremely accessible data storage—recoveries can be measured in seconds rather than hours with simple point-and-click restore.

Message Level Restore. Allows users to restore individual or group emails (at the mailbox level) without interrupting the email server. The ability to recover a single lost message quickly and easily is a boon to administrators, saving time and resources by never having to restore an entire database when they only need select emails.

Partners. VARs looking to add data protection capabilities to their services can sign up as a NetMass partner and begin offering online backup services in a few days.

In addition, ServerSafe offers deduplication, bare-metal restore, and versioning.

ServerSafe Total Data Protection

Starting at $40 per month with 30-day free trial

Easy-to-manage online backup service for Exchange, SQL, databases, Linux, Windows, and more

(800) 731-2737

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WIRELESS

JUNE 8, 2007

Get A Clear Wireless Signal

MetaGeek Wi-Spy 2.4x Helps Troubleshoot Interference

THE 2.4GHZ BAND is getting crowded, so you need to be able to discern ever-smaller gaps in the noise. That's why MetaGeek developed the Wi-Spy 2.4x—a 2.4GHz spectrum analyzer with an external, SMA-compatible antenna and nine times the resolution of the original Wi-Spy.



MetaGeek's new Chanalyzer 2.1 software offers improved graphics and more powerful controls.

Wi-Spy is the world's smallest 2.4GHz spectrum analyzer. It's so small (and inexpensive) because it harnesses the processing power of the computer you already own. Wi-Spy is perfect for troubleshooting interference from many devices, including Wi-Fi (802.11b/g/n), microwave ovens, cordless phones, and other Zigbee and Bluetooth devices.

With the addition of a reverse-polarity SMA adapter, Wi-Spy 2.4x offers the additional functionality and accuracy of adding an external antenna. The Wi-Spy 2.4x ships with a powerful little antenna, but it's a snap to add any RP-SMA-compatible antenna you choose.

MetaGeek's new Chanalyzer 2.1 software features improved graphics; powerful new play-through controls; and an even friendlier user interface that presents a more clear and concise view of your wireless landscape. Chanalyzer 2.1 supports both the original Wi-Spy and Wi-Spy 2.4x.

Combined with the Wi-Spy spectrum analyzer, Chanalyzer will help you visualize, troubleshoot, and optimize your wireless network at the office or on the road.

Use Wi-Spy if:

- You deploy and maintain Wi-Fi networks (it's perfect for independent wireless consultants)
- Your Wi-Fi has intermittent bandwidth problems
- The microwave interferes with your Wi-Fi network
- Your network connection drops when the phone rings

MetaGeek Wi-Spy 2.4x

$399

A 2.4GHz spectrum analyzer designed for troubleshooting interference from Wi-Fi (802.11 b/g/n), microwave ovens, cordless phones, and other Zigbee and Bluetooth devices

(888) 489-1596

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COMPONENTS

JUNE 8, 2007

External PCI Express Expansion For Laptops

Magma ExpressBox[1]: Connect An Internal PCI-E Card Externally To Your Notebook

ANYONE WHO HAS EVER WORKED while traveling has had to face the inherent limitations of laptop hardware performance. Inadequate graphics performance is often the worst setback in terms of throughput. Magma has solved this problem with its ExpressBox[1] product for connecting internal "desktop" PCI Express cards to a laptop computer via an external interface.

Two versions are available, one to fit half-length cards and one for full-length cards. The external enclosure, made of aluminum and plastic, has a built-in 60-watt power supply, but the company recommends using PCI Express cards that require no more than 55W of power. The enclosure has a 16-lane physical interface and can handle up to 2GBps of bandwidth in each direction.

The enclosure features three cooling fans that are temperature-controlled and a flip-top lid for easy installation. This product supports the latest operating system software such as WinXP/Vista and MacOS X.

A variety of mounting hardware is available for the enclosure. For instance, a vertical stand can be used to conserve limited space, or it can be laid flat on a desktop. The package also contains an optional rackmount kit that will fit the enclosure into a half-width 1U rack space. A 1-meter-long cable comes with the unit, although there are other options offered; the customer can specify a half-meter or

3-meter length for the external interface cable. This cable connects to the laptop via an ExpressCard/34 module.

For graphics applications, Magma recommends pairing ATI graphics technologies to achieve best compatibility. To accommodate users with a wide array of skill, Magma includes a quick-install guide that gets them up and running in six easy steps, with additional advice for troubleshooting, should the need arise. Magma also has plans to release a version that will accommodate dual-width cards.

Magma ExpressBox[1]

$729 for an enclosure that fits half-length cards
$749 for a full-length version

Lets you attach a "desktop-only" PCI Express card to a notebook

(858) 530-2511

www.Processor.com/ExpressBox1

MAGMA™

PHYSICAL INFRASTRUCTURE

MAY 25, 2007

VISTA Data Center Capacity Management

Aperture Releases A Software Add-on To Measure Consumption & Forecast Needs

DATA CENTER MANAGERS have their work cut out for them when it comes to planning for requirements in floor space, rack space, power, and cooling. The amount of time required to acquire new capacity for a data center can be excessive, and therefore planning is crucial for preventing outages and continuing to deliver services without overburdening existing resources.

Capacity management and planning is important to organizations because of the potential for saving money by increasing the efficiency of their operations. If there is too much capacity available to the data center, expenditures and maintenance will be too high. If there is not enough capacity to the data center, outages may occur and downtime can result, which is also costly. Not having enough capacity can also delay the implementation of new systems and cause schedule problems or failure to meet service level agreements.

Aperture, which specializes in software for managing data centers' physical infrastructure, has released a new software plug-in for its VISTA product, which is a complete data center infrastructure resource management system. Data center managers can now take a proactive stance toward capacity planning because the software gives them the ability to forecast the needs of the data center well in advance.

By taking advantage of the usage forecasting capabilities of the VISTA software, users can also save money by avoiding hazards such as the need for temporary solutions to capacity shortages (leasing space at another facility, for instance). They can forecast when key data center resources will run out, so they can plan ahead and minimize or prevent disruptions. In addition to forecasting future needs based on historical usage, users also have the ability to model planned projects and see their potential impact on existing infrastructure. Users can also allocate capacity within the data center to configurable units for budgeting purposes, which gives an added degree of flexibility.

VISTA is the first full-function capacity management tool. Developed with input from Aperture's Fortune 100 customers, it lets data centers adapt quickly to changing demands and run more efficiently.

Aperture Technologies VISTA Capacity Management

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Data Center Anywhere

Rittal Creates Data Centers In Small Spaces

by Elizabeth Millard

• • •

In a perfect world, every SME would have its own data center that's perfectly cooled, budget-friendly, fabulously secure, and scalable at a moment's notice—oh, and throw in a huge salary for the IT manager, as long as we're staring at this particular mirage.

Although that world isn't likely to become a reality any time soon, Rittal is taking a shot at making it at least somewhat possible (except for the salary part). The company manufactures a range of enclosures and accessories designed to turn a space into a more equipment-friendly data center location.

Leased Space? No Problem

One of the challenges for many SMEs trying to run dedicated data centers is that their spaces are often leased. To implement new cooling equipment or change flooring sometimes requires major negotiations with the building owner, but Rittal insists that such discussions can be bypassed by using an enclosure system.

"Sometimes, the building owner might not want to make an investment for a leased space," says Herb Villa, Rittal field technical manager. "That's difficult because you don't want to spend the money on a space that isn't yours."

There are many population areas, such as New York City, where most of the data centers are leased, he says. "Many companies don't have the luxury of owning their own building, so they don't think they can afford perimeter security or different power distribution, but they can."

Instead of offering a one-size-fits-most type of strategy, Rittal instead has an array of products that include server racks, electronic component cases, PC enclosures, heat exchangers, and monitors that track temperature, smoke, and vibrations as part of an access control system.

The use of these types of modular components allows a company to build out a data center as needed. After all, data storage needs don't tend to decrease as the company grows.

"One of the buzzwords of the industry is 'scalability,'" says Villa. "We provide that for smaller clients as well as those who have massive data centers. We want to give them a space they can grow into."

The components also allow for data center environments in buildings that were definitely not designed for the purpose. At one client, Villa recalls the IT managers wondering how to put their servers and storage media in the vault of an old bank building.

"They still had the giant vault doors," Villa says. "It was the only space they had to make into a data center." Rittal put in climate control and power distribution, allowing the center to run efficiently without losing the antique doors.

To help companies learn how to put the pieces together, Rittal also offers product training through seminars and classroom-based classes, as well as support services.

Keeping Cool

Although Rittal has numerous products that address different aspects of a data center, what SMEs tend to order most is climate control items, says Villa.

"Absolutely, climate control is a top concern, and for good reason," he notes. "Data centers of every size are growing and putting in more equipment, and to run properly, they need to be cooled correctly."

Rittal has several products that can be implemented to suit the space. Much like its enclosures, the cooling systems are easily adapted to leased buildings and rooms without starting a wrangle with building owners.

There are several fans in the company's catalog, including roof fans, enclosure blowers that help with airflow in cabinets, and an "air baffle system" that routes air from below an enclosure into a double-walled door and throughout a rack.

Roof-mounted or wall-mounted air conditioners provide more cooling capacity without having to be directly installed into the wall.

Villa notes that thermal management is particularly important for data center environments that are using blade servers, which are becoming more common at SMEs. Air-cooled systems are quickly reaching their reliability limit, he believes, because they have difficulty dealing with the elevated heat loads created by blades. Also, they tend to have a high noise level thanks to their air handlers, and he's seen electromagnetic compatibility problems caused by high-frequency CPUs.

Because of these issues, Rittal has been touting its liquid-cooling package, a high-density cooling system that uses an air and water heat exchange system developed by the company.

"In general, data center needs change," says Villa. "Now there's virtualization, and hosting sites are becoming popular. Having modular products that work together provides scalability, flexibility, and adaptability."

Company Name: Rittal

Location: Springfield, Ohio

URL: www.Processor.com/Rittal

Year Company Founded: 1961

Interesting Fact: The company is continually developing new products and trying to match technology advances such as nanotechnology and liquid cooling to the data center environment.

STORAGE

May 25, 2007

Virtual Tape Made Simple

NexiTech VTA*ng* Can Accelerate Your Backup & Restore Operations

In response to market demand, NexiTech has created a modular virtual tape array storage appliance: the next-generation Virtual Tape Array, or VTA*ng* (*vee-tang*).

VTA*ng* is a hardware/software product that transforms an ordinary computer or rackmount server and the hard disk storage attached to it into a D2D (disk-to-disk) backup appliance. The product is aimed at IT directors and managers in the small to medium-sized enterprise market and is designed to help accelerate backup and restore operations. Unlike other similar products on the market, the VTA*ng* can be customized.

Virtual tape emulation technology is used to create a device server that acts just like a bunch of tape drives from the perspective of one or more host computers or backup servers. Since the backup appliance presents a view of one or more "virtual" tape drives to the host, it is appropriately called a virtual tape array. Similar to a VTL (virtual tape library) but faster, the virtual tape array offers many of the same benefits as a VTL but with less complexity and lower cost of ownership.

Three Versions

VTA*ng* appliances come in three forms:

Head form. This device bundles hardware and software with a 1U or 2U rackmount server, but with minimal internal storage. This form is ideal for enterprises that want to try out virtual tape technology and at the same time save some money by using the head to convert legacy equipment into a D2D backup appliance. This helps them to preserve their existing investments in storage resources by extending the useful lifetime of those resources (yesterday's primary storage may be useful as today's secondary storage). Customers like the convenience of buying a more integrated solution that the head form brings, and they want to use it as a controller for some existing external hard disk storage (e.g. RAID or JBOD arrays) that they already have in their possession.



Disk form. This version provides a higher level of integration by bundling hard disk storage within the 3U D2D backup appliance. And with the use of ruggedized removable disk storage devices, the subsystem becomes a D2D2RD (disk-to-disk-to-removable disk) backup appliance, letting users archive backups with a true tape replacement technology: portable hard drives packaged for removability. Storage security is always a concern, but even more so when moving data offsite. To address that concern, there is an optional hardware-based compression/encryption engine that uses the AES-256 encryption algorithm.

Kit form. This version of VTA*ng* can vary depending on the existing hardware you wish to use. Give us a call or email us for details.

Simple To Use & Manage

VTA*ng* is simple to use and manage. A GUI lets you easily define virtual tape drives and configure the associated bus, target, and LUN values that will be seen by the host. The devices are conveniently arranged in a device tree, and any drives with media loaded are shown in boldface. The user can easily define the file that is used for the backing store and the file size by simply clicking a device. Virtual tape media can be loaded or unloaded with a click of the mouse, and all virtual tape devices can be started or stopped at once. The GUI also lets users trace all the SCSI commands sent to a particular virtual tape device and will save that information to a trace file. The iSCSI device mappings are also configured graphically, letting the user define which devices are mapped to iSCSI targets.

For those users that need to remotely manage the VTA*ng* backup appliance, Remote Desktop is bundled with Microsoft Windows Unified Data Storage Server 2003 R2, the operating system running on the appliance. Clients are available for most Windows versions, so a Windows client can control the desktop of the appliance and manage it over a network connection as if sitting right next to it.

Support for those particular tape drives that are emulated by VTA*ng* is bundled with Windows, so for many customers, connecting a VTA*ng* backup appliance is quite easy: the host detects the virtual tape drives and then automatically loads the correct driver.

Specifications

Connectivity: NAS and SAN
Transport: iSCSI, Fibre Channel, and SCSI
Media: Fixed and Removable Disk
Redundancy: RAID (0, 1, 5, 10, 50)
Virtualization: Virtual Tape and Disk
Encryption: AES-256

NexiTech VTA*ng*

Starting at $4,995, depending on configuration

A hardware/software product that transforms an ordinary computer or rackmount server and the hard disk storage attached to it into a D2D (disk-to-disk) backup appliance

(719) 687-3225

www.Processor.com/VTAng

Preparing For Downtime

Eaton Addresses Power Supply Issues

by John Brandon

• • •

Of all the highly technical issues in a data center, there's one simple fact that should never go unnoticed: devices require 24/7 power. No matter how effectively you can manage servers, consolidate equipment, increase throughput on networks, or ward off potential security risks, a server that is not receiving power is going to cause problems. Downtime in a data center is sometimes caused by incompatible technologies or the occasional network failure, but power failures are all too common—either due to problems in the building or city or because servers are overloaded.

Eaton is a 100-year-old, $12.4 billion company and has been involved with electrical systems and components in several categories—including the automotive and aircraft sectors—as a leading manufacturer and service provider. The company entered the UPS business with the acquisition of Powerware (www.powerware.com) in June 2004.

The company's most recent product is the Powerware BladeUPS, an uninterruptible power supply for Blade Servers that provides power from 12 to 60kW in a 19-inch rack size. A series of products is also available for protecting data center equipment that is housed in a small computer room or on a rack or enclosure. The company specializes in scalable, reliable products for making sure data centers never have a company-stalling power outage.

"One of the things we have seen—and this comes directly from our customers—is that power consumption is rising at a fast rate," says Sriram Ramakrishnan, business unit manager in Eaton's Power Quality Protection division. "Some have larger data centers, some have a rack environment with less than 200 servers, some are small businesses, but across all companies, power consumption is rising just by the sheer fact that customers are looking to do more with their IT systems than in the past."

"In fact," he says, "there has been a three-fold increase in power consumption over the past three to five years, and customers are deploying more and more IT equipment in high-density 1U and 2U sizes. Another trend we see is the rise of regulations, especially in the healthcare segments. All of this increased regulation means more redundancy and more power requirements, which is driving the need for larger-than-ever backup power systems."

Power Failure Causes

Ramakrishnan notes that power failures often result when IT adds new services quickly and servers become overloaded. It is sometimes a result of a building-wide failure or because the city has overloaded circuits or a disaster has occurred that has cut power, but the more typical cause is server overload, especially when IT has to expand quickly with new services for VoIP, video telecommunications, and new wireless networks.

"The fact that you are seeing this dramatic growth means customers have to ensure that the backup system is flexible and can grow with the needs of the company and a growing computer room. Our backup systems have always been modular in nature. So when we came out with the BladeUPS product, we offered it for a rack environment in a 12-kilowatt, 6U form factor so customers can add modules for a 19-inch rack. The product is squarely aimed at companies where the power needs are changing and the backup architecture must be scalable so they can add more units to racks as their IT service offering changes."

Broader Themes In Power

Ramakrishnan sees broad themes with power management in the data center—managers becoming more and more focused on energy efficiency and controlling server power usage. The biggest theme he has seen with small and medium-sized enterprises is managing and understanding the power needs in a data center right down to the specific power strip for one server. He sees managers asking questions such as, "If I plug in this one additional component, will it trip a breaker, or will it change the power consumption down the road?"

Eaton offers power management services that allow admins to monitor usage and record specific usage patterns for analysis and planning. The company offers PDUs (power distribution units) with energy management monitoring software that allows admins to see power loads per circuit. Monitors help admins understand when a power failure occurred in an archive that helps them plan for the future, tracking energy consumption per server or rack. This monitoring can lead to energy savings now and help companies plan for how energy companies will offer efficiency credits if they take certain measures to control and monitor power usage in a computer room.

Ramakrishnan says the issue of power management and preventing outages is critical because outages cause 20 to 40% of all downtime occurrences. There are factors outside of the data center, as well, of course, such as a corporate neighbor installing an energy-consuming furnace.

Overall, power requirements are changing as IT becomes more and more integral to the health and technological advances inside a company. To the extent that a company can make sure the data center is not causing any slowdowns in productivity company-wide, Eaton power backup equipment and monitoring services are an indispensable—even foundational—part of a fully functional, streamlined data center.

Company Name: Eaton

Location: Cleveland, Ohio

URL: www.Processor.com/Eaton

Year Company Founded: 1911

Interesting Fact: Most data center outages are a result of overloading servers, not because of a building failure or city power failure.

DATA CENTER SERVICES

April 6, 2007

Turn Old Equipment Into Cash

Horizon Datacom Solutions Helps Businesses Make The Most Of Their Network Hardware Investments

Horizon Datacom Solutions, located in Columbus, Ohio, has one specific goal: helping businesses make the most of their network hardware investment. Many businesses are faced with growing (sometimes painfully high) capital budgets, and yet they have literally stacks of switches, routers, wireless gear, and other network hardware that they have outgrown, no longer need, or don't have room for. Some businesses find that they have racks filled with decommissioned hardware, or that due to expansion or changing needs, they don't have the right equipment.

In the past, the hardware would simply sit in a spare room or corner until it was eventually hauled away and disposed of in a mass "asset recovery" that took CRT monitors, desktop computers, printers, and other e-waste and hauled it away. But this no longer has to be the case.

Horizon Datacom Solutions specializes in refurbishing network hardware and can help you recover value out of what you have. Plus, selling your equipment to us helps keep it out of a landfill, helping contribute to your corporate "green" initiatives.

Get Value From Used Equipment

Horizon Datacom helps businesses and organizations get value back from their used equipment. Stated simply: We turn old network equipment into cash.

We are committed to refurbishing and putting that same equipment we purchase back into useful life, which provides additional value to our customers who both save money purchasing from us and get reliable hardware, backed by our guarantee and hard-won reputation for quality and customer service.

At Horizon Datacom Solutions, refurbishing involves much more than blowing the dust off of circuit boards. Horizon Datacom maintains a full testing lab where every piece of equipment is rigorously tested and repaired if necessary. We repaint the chassis, replace missing or broken parts, and carefully repackage the finished product. In fact, many of our customers claim the hardware they purchase from us is virtually indistinguishable from new hardware.

Horizon also offers refurbishing services for companies that want to redeploy their own gear. You simply send it in, have it tested and refurbished, then it's sent back to you, ready to deploy at new locations or for new uses.

Real-Time Inventory

Some businesses are leery about buying from the "refurb" market—some with good reasons. eBay can be a crapshoot: You may be dealing with a guy operating out of his garage, or worse, finding yourself buying counterfeit gear.

Horizon Datacom has been in business for more than 10 years. And, in 2003, we were recognized as one of the Inc 500 fastest growing businesses in America. Businesses worldwide purchase refurbished networking equipment from Horizon Datacom.

Horizon maintains a complete, real-time inventory listing on its Web site at www.horizondatacom.com. While some companies may say, "I can get that for you," when you use Horizon Datacom's online store, you can be assured that what you see online is on the shelf and ready to be shipped to you. In fact, most orders are packed and shipped the same day. And right now we're offering free FedEx ground shipping on most orders of $100 or more within the continental United States.

Repeat Customers

Vicky Nosbisch, owner and president of Horizon Datacom Solutions, says, "I'm proud of the fact that most of our customers are repeat customers. Few things give me greater pleasure than buying network gear from a customer, seeing it arrive at our loading dock, then coming back to life in our test labs, ready to find a new home with a new customer."

And Vicky has a challenge: "Send me a list of your unused network gear. We'll show you how much it's worth, make you an offer, and help you find the network hardware you need."

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Chill Out With MovinCool

Air Conditioner Firm Specializes In Product Requiring No Floor Space

by Curt Harler

• • •

Summer in the city is tough on people. Heat is even tougher on computer equipment. One air-conditioning company wrestled with the former problem and found it had developed a solution for the latter.

"We got our start providing cooling for our factory workers in Japan where they were manufacturing automotive parts through the hot summer months," says John Doran, senior manager of the heat management department at MovinCool. MovinCool is a division of DENSO of Japan, which has a long history in the automotive industry. The company, a Toyota-group firm, designed units to cool workers in factories.

About 25 years ago, DENSO brought its spot coolers to the assembly lines in the United States, hoping to provide cooler working conditions for American laborers. However, it soon found the market for cooling telecom and network cabinets was much more enticing. The company also had a money-saving pitch to offer.

In cities where rents run $50 a square foot, it costs $50 a year just to keep a 12- x 12-inch trash basket on the floor. Cooling units take up far more space. However, one of MovinCool's sales points is that it has coolers that require no floor space. The company's air-conditioning units attach overhead. (Besides, heat rises, and cold falls, so it is more efficient that way.)

That concept works well in small telecom closets and server rooms where space is at a premium. Many SMEs have remote offices that have little more than coat closets to store computer equipment. There is little room then to add an air conditioner. MovinCool's products are specifically for computer and office environments that require room temperatures between 60 and 90 degrees Fahrenheit.

Company Name: MovinCool (a division of DENSO)

Location: Long Beach, Calif. (headquarters in Kariya, Japan)

URL: www.Processor.com/DENSO

Year Company Founded: 1982

Interesting Fact: If you drive a Toyota, it is a near-certainty that you have a DENSO heating and air-conditioning unit in it.

A Variety Of Cooling Options

The newest air conditioner from MovinCool is the CM12 (CM stands for "ceiling mounted"), which delivers 10,500 BTU per hour at 80 F at 50% relative humidity. It is rated at 13,000 BTU per hour at 95 F and 60% relative humidity. It runs on standard 115-volt, 15-amp power, so no special electric hookup is required in any office environment. The unit is only 15.5 inches tall, making it able to fit in most ceiling spaces. In addition, the CM12 is neither time-consuming nor technical to install because it comes with built-in flanges and mounting brackets. It retails for $2,786.

MovinCool's line is especially attractive to SMEs with limited floor space. "Sometimes, server rooms are so small that there literally is no room to put a cooling unit in the closet," Doran says.

One nice feature of the CM12 is the audible alarm for condenser overflow on the units. The unit will connect to most building control systems, and it works with fire alarm systems for emergency shutdown.

The alarm is a single dry-contact connection. On low-end models, there is a single module that attaches to the alarm; on upper-end models, there are separate modules for temperature, moisture, and humidity, and the sensor plugs in along with the other alarm inputs.

MovinCool just installed the alarm system in its own data center. "It's a relatively new feature for us," Doran says. The company turned the installation into a teachable moment with the product manager and engineering department working together on the installation. "We do use our own product," he notes.

Some IT managers will be more familiar with the company's earlier lines, the Classic and the Office Pro. Office Pro was the company's initial entry into the market.

Today's Classic comes in ranges from 10,000 to 60,000 BTU per hour. Most IT departments simply set a temperature and let the unit run. However, in cases where more precise temperature control is required, the company's Classic Plus Series offers the same benefits as the Classic series, plus digital temperature controls.

The latest models in the Office Pro series have all the features of the Classic MovinCool spot coolers and dozens of new features, including programmable electronic clocks for automatic evening and weekend operation.

For small shops, the PC 7 provides 7,000 BTU per hour cooling for $589. This portable floor model runs as quiet as a mouse and uses little power. A 6-inch exhaust duct is required in most applications and is included.

Change In Freon

One major change that will affect SMEs no matter whose equipment they use is the requirement that air conditioners phase out the R22 coolant by 2010.

"We are moving to the more environmentally friendly R410A," Doran says. In fact, most of the company's Office Pro units will be on R410A by the end of this year. Other units will be upgraded in 2008, leaving only one or two models to be upgraded in 2009.



Start-Up Targets Backup, Recovery & Data Protection

Road To Market Gives ArmorCore Perspective

by Darrell Dunn

• • •

To break ground and grab attention as a relatively new company in the burgeoning backup, recovery, and data protection market, executives from ArmorCore Technologies believe an ability to stay nimble, independent, and opportunistic can help the company continue to expand its position throughout SME and large enterprise accounts.

"We see an opportunity and understand the landscape," says Tom Kane, vice president of channel sales and a founder of ArmorCore, along with Chaim Hager, vice president of marketing. "For far too long there has been a huge misrepresentation as to what backup and recovery really is, and I feel it is our job to evangelize the differences."

Too often, businesses, particularly SMEs, have relied on backup technology that promises to provide a true disaster recovery platform, only to find out that the recovery portion of the equation is lacking, Kane says.

"Too often these companies find out that while they can ultimately recover, it may take three days instead of the few minutes we can enable," he says. "And the SMB market is what most appeals to us. We believe that providing a complete disaster recovery solution from end to end at a very minimal cost and installation effort is an area that is not being adequately addressed."

The primary products for ArmorCore are its Armor Backup & Recovery software; Armor Security Suite software; Armor RAID and FaStor backup and recovery appliances; and the Armor Cases, ruggedized protective cases for transporting computers, PDAs, and storage drives and cartridges.

A proponent of disk-based backup and disaster recovery, the Armor RAID system has dual drives for mirroring, and the drives are hot-swappable. The FaStor uses ruggedized 40 to 160GB disk cartridges that provide an easy and compact method to meet offsite storage requirements, Kane says.

Getting Started

With more than 1,000 customers gained during its two and a half years in operation, the executives at ArmorCore have learned that building a new company, even when the technology is strong and market is ripe, can be a difficult and winding road with plenty of bumps, detours, and lane changes.

Although the company was founded in 2004, its core officers have been working since the late '90s to create ArmorCore's product line and develop a market strategy.

"How do you eat an elephant? One bite at a time," Hager says. "While the big security guys are out there trying to take things at leaps and bounds, we are working one bite at a time and trying to digest what we've consumed. As fast as you grow, you can fall."

Initially intrigued by a data protection and recovery hardware platform developed by a former partner, Hager and Kane worked to create a business plan that would utilize the intellectual property as a basis for a start-up company. As they began to talk with system vendors, resellers, and other potential partners, the relationship with the original technology developer became increasingly tense, and eventually they parted ways.

Undaunted by the inability to get their original company off the ground, Hager and Kane formed a relationship with a backup and recovery software company in Utah and an encryption company in Germany. Using a staff that had already been assembled with extensive backgrounds in storage and security, ArmorCore was created with the goal of providing business continuity for desktops, mobile equipment, and servers.

The Road Ahead

Hager and Kane are proceeding cautiously. The company has had numerous conversations with potential partners but has engaged in mutual programs infrequently. There are plans to complete a new partnership with an antivirus software suite platform soon.

At one point the company invested a significant amount of resources with a venture capital-funded data protection company only to see the venture capital firm become impatient with the progress, pull its financing, and effectively shut down the company, quashing any budding relationship with ArmorCore.

"You start looking at how the partner incorporates your technology, how you incorporate their technology, branding concerns, roadmaps, and in the end as much as many of these people may want to do the deal, it just goes onto the treadmill," Hager says. "Today we are really looking for the perfect marriage situation. We create a limited relationship and will 'date' for some period and, if everything works out, look to create a true partnership."

ArmorCore is also cultivating equipment manufacturers, resellers, and channel partners, ensuring that it intends to remain committed to the market. Significant partners include WebCom247 (www.webcom247.com), NextDayPC (www.nextdaypc.com), and One Great Tech (onegreattech.net).

Company Name: ArmorCore Technologies

Location: St. Paul, Minn.

URL: www.Processor.com/ArmorCore

Year Company Founded: 2004

Interesting Fact: Some difficult experiences getting its backup and recovery technology company started is keeping ArmorCore executives focused on incremental gains.

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The appliance's new version 2.0 firmware offers additional database support, enhanced identity management capabilities, customizable self service features and an improved GUI and reporting tools.

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The IDsentrie appliance offers integrated features designed to enhance network authentication.

Improved GUI and reporting tools. IDsentrie's GUI has been streamlined to speed access to many of its key features and has added a new reporting function to let users quickly access IDsentrie's more than 140 reports.

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The EX Series secure WAN management appliance offers identity-based application visibility.

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A10 Networks

Steelcape Pushes Network Envelope

Continued from Page 1

These Agents work to improve network communications performance and security and can be installed on desktop systems/servers, application servers, and database servers. Because the Agents function independently, secure data flow can be accomplished without requiring the Steelcape Enterprise Server at all times.

"We have software-based Agents, an Applet version for e-commerce, and an external hardware appliance. Almost 50% of our clients prefer an external hardware appliance, and the others prefer software inside the servers or client," Norman says.

Another element is the Steelcape Gateway, an appliance that works in tandem with security and business apps and data storage devices to boost performance and security. Also available is the Steelcape Embedded Library, which facilitates a session between software applications or hardware devices, such as NAS/SAN appliances that need built-in, comprehensive security.

Company Name: Steelcape

Location: Los Angeles, Calif.

URL: www.Processor.com/Steelcape-Inc

Year Company Founded: 2004

Interesting Fact: Claims to be the only company with technology that can send information without opening ports.

Flexible Deployments

According to the company, the Steelcape solution can work in any environment but has particular appeal in VPN and VLAN architectures, where it can be deployed without modifying existing equipment.

"We are a perfect replacement for VPN, as we provide a more robust 'tunnel,'" Norman notes. "In addition, there are no pesky authentication keys to manage—which is a headache."

Once in place, Steelcape products allow operation of the VPN or VLAN with no open ports and provide continuous authentication of source and destination clients. In addition to these environments, the company's technology can be applied to other point-to-point communications, such as FTP, SSL (secure sockets layer), Telnet, and MIME (multipurpose Internet mail extensions).

The Steelcape communications protocol is compatible with TCP/IP and creates a direct tunnel between components. The result is not only increased security but also accelerated traffic aided by the removal of redundant TCP processing, maximized bandwidth utilization, and packet compression. However, Norman notes that the performance improvements are a by-product of the technology because the company continues to focus on security.

In a typical Steelcape communications session, an Agent detects a Steelcape-enabled communication request, prompting the Agent to connect and authenticate to the Enterprise Server to request a connection to the destination Agent. The Server checks that the source and destination Agents are configured to communicate and asks for authentication from the destination Agent. After authentication, the Server issues routing information to both Agents, which establish a unique connection and begin communicating.

Looking Ahead

In the future, Steelcape will be introducing a rack-mounted, high-volume unit for large financial transactions. Also, Steelcape is looking toward the realm of digital content delivery, which Norman notes is growing in priority but faces challenges when using standard protocols.

"Currently, using TCP/IP is like pushing a watermelon through a garden hose," he says. "We have the ability of using all of the bandwidth—in a sense, turning a garden hose into a walk-in tunnel."

The Buzz Around Windows Server 2008 Beta 3

Continued from Page 1

of servers in companies of all sizes has made it vitally important to simplify the IT administrator's task as much as possible.

Eric Rezabek is a program manager on the Windows Server 2008 team. "We put a great deal of effort into understanding our customers' top issues with the current server offerings in order to address them in Windows Server 2008. Many of those issues were well known, while others were somewhat of a surprise," says Rezabek.

The more control and greater flexibility themes are closely related. "Many of our customers told us they wanted the ability to install servers for specific purposes and at the same time reduce the amount of time and effort required to manage those servers," says Rezabek. The new modular approach has been named Windows Server Core and focuses on creating a server custom-tailored with only the necessary components needed to accomplish a specific task.

Security and reliability have been at the top of Microsoft's list for quite some time. Windows Server 2008 addresses this subject from multiple angles to provide the highest level of protection possible. NAP incorporates a number of technologies and techniques to isolate systems that don't meet a minimum level of requirements such as antivirus and operating system patch level.

New Features

Microsoft has done a lot to help make Windows Server 2008 easier to manage. The new version of Windows Manager has a much improved user interface, along with a multitude of wizards that help simplify many of the typical administration tasks. Those same management functions are also available from the command line, making it easier to automate standard configuration tasks.

One key component to Microsoft's automation strategy is Windows PowerShell. This replacement to the venerable command line based on Microsoft's DOS adds a whole new world of capability to creating scripts. Beta 3 is the first version of Windows Server 2008 to include Windows PowerShell in the distribution. You can find a wealth of information on Windows PowerShell on the Microsoft Script Center site (www.microsoft.com/technet/scriptcenter/hubs/msh.mspx).

"We see PowerShell as a key part of Microsoft's overall management automation story. PowerShell will make it possible to automate numerous tasks into a single command file executed in one step. IT administrators will be able to either use scripts provided to them or create their own," says Christopher Voce, analyst with Infrastructure and Operations for Forrester Research.

IIS (Internet Information Server) 7.0 is available for the first time in the Beta 3 release of Windows Server 2008. The latest release of IIS includes a whole host of features and a new modular architecture with more than 40 installable modules. Modularity also makes it possible to configure the Web server with just the minimum capabilities needed to reduce the overall attack surface.

BitLocker drive encryption was a new feature introduced with Windows Vista, making it possible to encrypt an entire disk drive as an added protection layer against data theft. This same technology has been incorporated into Windows Server 2008 for situations such as a remote branch office that could contain sensitive information.

Missing In Action

Virtualization is the most high-profile component that didn't make it into the Beta 3 release. Microsoft has announced that a beta version of the technology will be available with the RTM release of Windows Server 2008. The final version of Windows Server virtualization is scheduled for release within 180 days after the release of Windows Server 2008.

Some of the features originally planned for Windows Server Virtualization have been cut as well. One significant feature cut was something called live migration. This would allow running virtual machines to be moved or migrated from one physical machine to another. Live migration will make managing dynamic application loads as simple as moving a file from one server to another.

Another feature removed from the initial release of Windows Server Virtualization is the ability to add resources while the virtual machine is running or "hot resource adding." This feature is another helpful tool to deal with dynamic loads.

Action Plan

The big question for many IT administrators is should they download and test the Beta 3 release or just wait for the RTM release. Forrester's Voce says, "We think there's real benefit for administrators and IT pros in organizations of all sizes to begin to get familiar with the new features and changes in Windows Server 2008."

System Requirements For Windows Server 2008 Beta 3

Processor

- Minimum: 1GHz
- Recommended: 2GHz
- Optimal: 3GHz or faster

Memory

- Minimum: 512MB RAM
- Recommended: 1GB RAM
- Optimal: 2GB RAM (full installation) or 1GB RAM (Server Core installation) or more
- Maximum: 32GB RAM (32-bit systems) or 64GB RAM (64-bit systems)

Available Disk Space

- Minimum: 8GB
- Recommended: 40GB (full installation) or 10GB (Server Core installation) or more
  Note: Computers with more than 16GB of RAM will require more disk space for paging, hibernation, and dump files.

DVD-ROM drive

Super VGA

- 800 x 600 pixels or higher resolution monitor

Keyboard

- Or compatible device

Mouse

- Or compatible pointing device

SOURCE: MICROSOFT WINDOWS SERVER 2008 BETA 3 REVIEWERS GUIDE

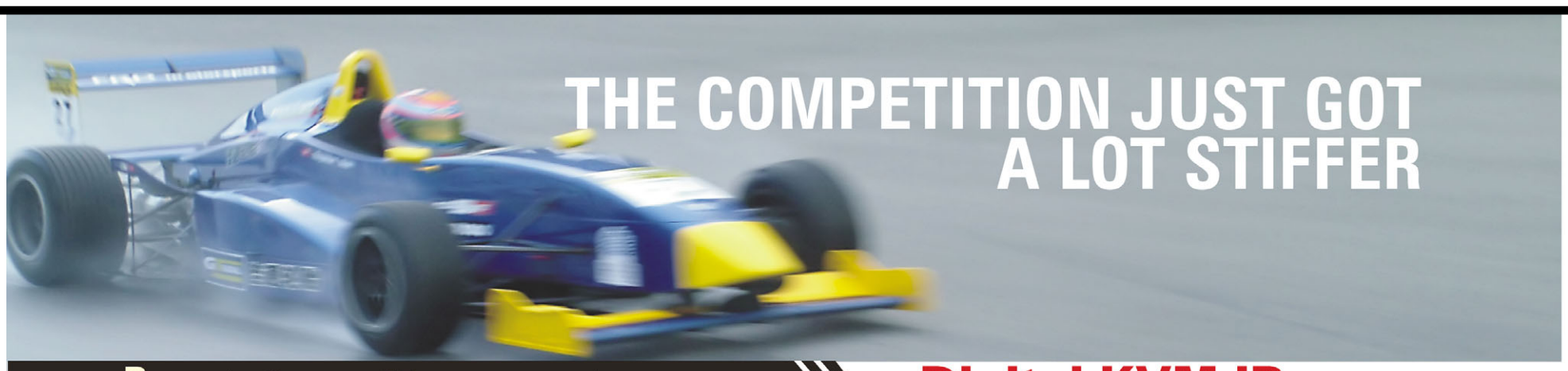
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- Video tuning and skew adjustments available
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- Supports singlemode or multimode fiber cable
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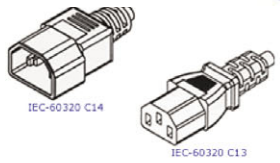
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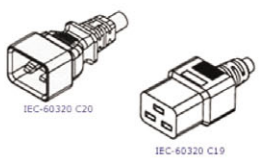
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AC Power Cord IEC 60320 C14 Plug to C13 Connector 250v Black



Item	Length	Amps	Gauge
1540	8 inch	10A	18/3
4663	1.5 foot	10A	18/3
1736	2 foot	10A	18/3
7691	2.5 foot	10A	18/3
5413	3 foot	10A	18/3
1775	3.5 foot	10A	18/3
2965	4 foot	10A	18/3
1778	4.5 foot	10A	18/3
3262	5 foot	10A	18/3
9160	5.5 foot	10A	18/3
5612	6 foot	10A	18/3
3220	6.5 foot	10A	18/3
1228	7 foot	10A	18/3
2986	8 foot	10A	18/3
4671	1 foot	13A	16/3
4403	1.5 foot	13A	16/3
4670	2 foot	13A	16/3
4142	1 meter	13A	16/3
8037	4 foot	13A	16/3
2832	6 foot	13A	16/3
7365	1 foot	15A	14/3
4962	1.5 foot	15A	14/3
1965	2 foot	15A	14/3
7231	1 meter	15A	14/3
1529	4 foot	15A	14/3
7415	5 foot	15A	14/3

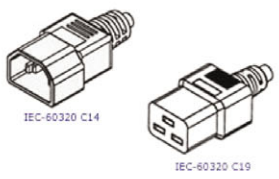
AC Power Cord IEC 60320 C20 Plug to C19 Connector 250v Black



Item	Length	Amps	Gauge
2881	1 foot	20A	12/3
3101	2 foot	20A	12/3
2992	3 foot	20A	12/3
3002	4 foot	20A	12/3
7784	5 foot	20A	12/3
2928	6 foot	20A	12/3
1007	2.5 meter	20A	12/3
7995	3 meter	16A	12/3
3779	3 meter	20A	12/3

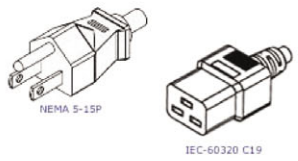
Premise Wiring

AC Power Cord IEC 60320 C14 Plug to C19 Connector 250v Black



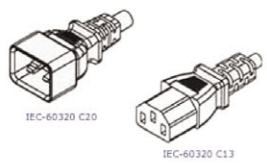
Item	Length	Amps	Gauge
9431	1 foot	15A	14/3
9430	2 foot	15A	14/3
6201	3 foot	15A	14/3
9429	4 foot	15A	14/3
6154	4.5 foot	15A	14/3
9428	5 foot	15A	14/3
4586	6 foot	15A	14/3

AC Power Cord NEMA 5-15P Plug to C19 Connector 125v Black



Item	Length	Amps	Gauge
8788	2 foot	15A	14/3
8826	3 foot	15A	14/3
9118	5.5 foot	15A	14/3
1409	8 foot	15A	14/3
8723	14 foot	15A	14/3

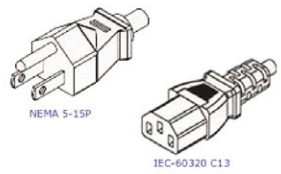
AC Power Cord IEC 60320 C20 Plug to C13 Connector 250v Black



Item	Length	Amps	Gauge
9509	1 meter	15A	14/3
8047	2 meter	15A	12/3
9157	2 meter	15A	14/3
4177	6 foot	10A	H05VV-F 3G1.5
9183	6 foot	15A	14/3

Power

AC Power Cord NEMA 5-15P Plug to C13 Connector 125v Black



Item	Length	Amps	Gauge
5917	1 foot	10A	18/3
3862	15 inch	10A	18/3
2996	1.5 foot	10A	18/3
1092	2 foot	10A	18/3
3858	3 foot	10A	18/3
7232	4 foot	10A	18/3
1063	5 foot	10A	18/3
6085	6 foot	10A	18/3
8797	7.5 foot	10A	18/3
4680	8 foot	10A	18/3
4679	10 foot	10A	18/3
5444	12 foot	10A	18/3
2966	15 foot	10A	18/3
3581	20 foot	10A	18/3
1394	25 foot	10A	18/3
7983	1.5 foot	13A	16/3
3284	2 foot	13A	16/3
8778	1 meter	13A	16/3
1597	3 foot	13A	16/3
6755	4 foot	13A	16/3
8829	5.5 foot	13A	16/3
8779	2 meter	13A	16/3
2889	6 foot	13A	16/3
7853	8 foot	13A	16/3
8780	3 meter	13A	16/3
7238	10 foot	13A	16/3
7534	20 foot	13A	16/3
3268	1 foot	15A	14/3
2133	1.5 foot	15A	14/3
3267	2 foot	15A	14/3
8612	1 meter	15A	14/3
8874	3 foot	15A	14/3
1795	4 foot	15A	14/3
8831	5 foot	15A	14/3
8605	2 meter	15A	14/3
2888	6 foot	15A	14/3
1924	8 foot	15A	14/3
8611	3 meter	15A	14/3

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* Total 1024MB, 2pcs x 512MB Kingston DDR2 533MHz FB-DIMM ECC
* Seagate SATA II 400GB 7200 RPM 16MB Cache SATA 3.0Gb/s Hard Drive
* 24 x 1" Hot-swap Drive Bays
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Product Releases

PHYSICAL

Cable Distribution

■ **Leviton** announced Recessed Patch Panels, which are designed for use in equipment cabinets. The panels are ideal for applications in which the back rail is close to the rear doors, and they work well in applications with little depth in front of the panel. The Recessed Patch Panels have a recess depth of 3 inches from the installation point, offering an ideal patch cord bend radius. The panels are compatible with standard 19-inch racks and cabinets and are available in Universal and QuickPort styles, as well as in 1RU 24-port, 2RU 48-port, and 2RU 72-port configurations. The Universal panels come with both eXtreme 6+/Cat 6 and GigaMax 5e/Cat 5e varieties.

Power Protection

■ **MGE Office Protection Systems** announced its Pulsar MX Frame that accommodates MGE's new Pulsar MX 5000 RT power and battery modules. When the Pulsar MX online double-conversion power modules are connected in parallel within the new Pulsar MX Frame, the power can be scaled from 5kVA to 10kVA, 15kVA (with redundancy), or 20kVA power levels, within the Pulsar MX's 16U (28-inch) frame. The same power and battery submodules can be used for both the standalone UPS and the modular chassis. Using 3U (5.25 inches) for the combination of power and battery submodules, the 5kVA compact 3U rackmount/tower units feature hot-swappable battery and power submodules, an auto battery test, switched outlets, a multilingual LCD display, and intuitive power management software. Pulsar MX Frame has two communication slots for redundant network integration. Both the frame and modules can grow as a company's power needs increase.

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■ **Para Systems** released two Minuteman EnSpire Standby UPS systems, including the EnSpire EN400 and EnSpire EN600, which are rated at 400VA/300W and 600VA/300W, respectively. Each model has six outlets, two of which have additional surrounding space that make them ideal for transformer blocks. Three outlets offer battery support and spike protection, and the others offer only spike and surge protection with the outlets standing at the top of the units. The UPSes also include SentryPlus monitoring software, which includes auto-shutdown capabilities, and are RoHS compliant, and the USB connections do not require special drivers (if you use the units with Windows). The units include Minuteman toll-free technical support and two warranties. One three-year warranty covers parts, labor, and a $50,000 Minuteman Platinum Protection Plan for U.S. and Canadian customers. The battery warranty lasts two years. The EnSpire Series is available for between $59 and $75.

Racks & Furniture

■ The trouble with a hot aisle/cold aisle layout when it comes to cooling switches with side-to-side ventilation, **Chatsworth** says, is hot spots caused by the inadvertent recycling of heated air. Hence, the company has announced its N-Series TeraFrame Network Cabinet with CPI Passive Cooling Solutions (such as ducting) to address this problem. The N-Series is available in 10 heights and 11 depths. See www.chatsworth.com/configurator for configuration options.

COMMUNICATIONS

Application Networking

■ **A10 Networks** announced its AX Series application acceleration switches. Tuned for multiple CPUs and multiple cores, the AX Series helps enterprises and ISPs maximize application availability. With its ACOS (Advanced Core Operating System), the AX Series can accelerate high-volume and bandwidth-intensive network applications such as voice, video, and data during peak usage conditions. It also helps businesses make full use of the performance benefits that result from hardware upgrades. A10's AX Series with ACOS has maximum per-CPU independence with near zero interference among CPUs. By evenly distributing application traffic to the system's processors, ACOS eliminates performance bottlenecks caused by unevenly loaded processors. The AX Series is available in four models: the AX 2000 for enterprises, and the AX 2200, AX 3100, and AX 3200 for enterprises and ISPs. Integrated 10-Gig support is included in the AX 3100 and AX 3200 models.

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■ **Nortel** introduced the Secure Router 4134, WLAN 2300, and Application Accelerator to provide products for improving hyperconnectivity. The solutions allow branch offices to have the same capabilities as the head office, mobilize business applications to boost WLAN performance, and accelerate business applications by condensing bandwidth needs. The Secure Router 4134 is designed to streamline the number of disparate networking devices found in branch offices by integrating WAN routing, Ethernet switching, security, and IP telephony into a single platform. The WLAN 2300 includes enhancements for WLAN scalability and performance, as well as enhanced deployment flexibility. The Nortel Application Accelerator quickens Web-based applications and includes profiles that have been optimized and tested for Microsoft's Outlook Web Access, Microsoft Office SharePoint Portal Server 2003, and IBM WebSphere Portal.

Network & Systems Management

■ **Citrix** announced the release of its software-based WAN optimization client, which the company says extends LAN-like application performance to mobile employees, including those working outside branch offices. Citrix says a new WANScaler client is the industry's first to address the challenge of interoperating with secure application access solutions, such as SSL VPNs, by interoperating with Citrix's Access Gateway SSL VPN client. Other new additions in the WANScaler line include QoS features that preserve and protect response times for interactive apps, better ease of use, and expanded network interface abilities for supporting enterprise networking environments. Further, better reporting abilities will provide more in-depth application performance stats and trending information for better strategic troubleshooting in the WAN.

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Product Releases

Continued from Page 16

■ Long-term data capture in a mobile appliance—that's **ClearSight's** new Network Time Machine. Designed to capture two channels of full line-rate Gigabit Ethernet, the Network Time Machine can store incoming data on internal hard drives in a RAID 50 array. Hardware-based 20ns timestamps, full-cover CSA features, and remote controllability are built in. The Network Time Machine comes in four briefcase models.

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■ **Mazu Networks** released a new Mazu sensor that promotes network visibility on 10Gbps networks. The sensor allows visibility of applications, devices, and hosts and can detect performance or security problems. The sensor sends statistics to a Mazu appliance, which analyzes and aggregates the statistics. Thanks to the sensor, Mazu offers layer 7 application visibility for 10Gbps networks.

Security

■ Employee surveillance just got easier with new Enterprise Behavior Analysis features for the Metron appliance. Using **eTelemetry's** Organizational Network Analysis and people-to-IP technology, Metron EBA can create reports on the behavior of individually identifiable employees—whom they communicate with, where they surf, and how "connected" they are both inside and outside the company. As a bonus, this spy appliance can bring potentially malicious employee behavior to light, along with any other behavior you don't like.

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■ **IBM** announced a new Secure Perspective 6 for System i tool that will let businesses create enforceable, customized security policies more easily. The tool is available on IBM's all-in-one System i business computer platforms with availability planned for other company servers later this year. IBM says the tool will let business leaders create security policies without needing to know where or how information is stored. Additionally, users can map terms from the policy to digital assets in order for security policies to be enforced or compliance checked with a mouse click. IBM says the System i platform is the first company platform to run Secure Perspective because i5/OS security is among the most advanced and can support the tool with few adjustments needed. IBM Secure Perspective for System i is available in the United States for $1,500 per managed processor. The first year of software maintenance is included.

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■ **McAfee** announced the release of IntruShield 10 Gigabit Ethernet platforms, which it says are the first and only network IPS appliances that offer performance up to 10Gbps, as well as the highest gigabit port density available. The release includes the IntruShield multigigabit M-Series, which is designed to meet the growth of IPS in the network core and data center, in addition to the growth of 10 Gigabit Ethernet and IPv6 networks. Additionally, McAfee has released IntruShield 4.1, which delivers breakthrough network and system integration and collaboration. The release is part of the company's SRM (security risk management) strategy for combining threat protection with risk and compliance management aimed at reducing complexity and cost with increasing efficiency and value. IntruShield 10 Gigabit Ethernet platforms will be available in the second half of this year.

• • • • •

■ **Portwell Technology** announced the NAR-5530, a network security appliance server in a 1U rackmount form factor. The NAR-5530 includes the Intel Q965 Express Chipset and has a 1,066/800MHz FSB. It also integrates an Intel Core 2 Duo processor. The NAR-5530 is a practical option for communication and security applications for enterprise Internet Security, firewalls, WAN optimization, antivirus, UTM, media gateways, and Triple Play broadcasting. The NAR-5530 is backward-compatible with Pentium D processors and most processors in an LGA-755 socket. This appliance also includes up to three GbE ports on PCI and up to six GbE ports on PCI-E x1.

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■ **SurfControl** announced the release of the SurfControl Web Filter Appliance, a ready-to-deploy, purpose-built solution with Web Filter software preinstalled on an ISA-based, hardened Windows appliance. This product provides full visibility and policy control across a full spectrum of Web-based content. The SurfControl Web Filter Appliance protects from the security, regulatory, productivity, and network performance risks that can result from inappropriate Web usage and from related threats such as IM, streaming media, file downloads, and Web-based email. Organizations also receive SurfControl's threat protection with the SurfControl Web Filter Appliance. SurfControl's global sensory network feeds into Web Filter's Internet Threat Database and Virtual Control Agent to provide zero-day, focused threat categories including International and multicultural content and dynamic categorization of unknown Web sites.

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■ **Tumbleweed Communications** announced its MailGate messaging security appliance that can process up to 1.8 million messages per hour. The Tumbleweed MailGate appliance enables enterprises to remain ahead of the recent increase in spam volume and size. Companies can also use MailGate to perform outbound content filtering to protect intellectual property and other sensitive data. To enhance MailGate's performance, Tumbleweed has incorporated dual-core processors, redundant drives with RAID controllers, and embedded systems-management processors for remote serviceability into the MailGate line. Tumbleweed has also enhanced its worldwide support levels with same-day, onsite service for hardware issues.

Switch

■ **Transition Networks** expanded its family of PoE products with the addition of two new PoE switches. The new Transition switches enable customers to power legacy PoE PD devices that traditionally required power from unused pairs or via a reversed polarity system. They also offer a reversed polarity cross through an optional Power-Cross cable. The MIL-SM8TXAF2GPA is a DC- or AC-powered SNMPv1/2/3 switch that offers eight ports of 10/100Base-TX with integrated POE injector for all eight ports. The MIL-SM802GAF is an AC-powered SNMP managed switch with eight ports of 10/100Base-TX with an integrated PoE injector that offers full PoE capability on four ports. Both new switches deliver 15.4 watts of DC power on each of either eight or four ports. The switches will be available for shipping next month.

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HVAC

APRIL 13, 2007

Cooling For Cramped Spaces

MovinCool CM12 Ceiling-Mounted Unit Designed To Save Space & Money

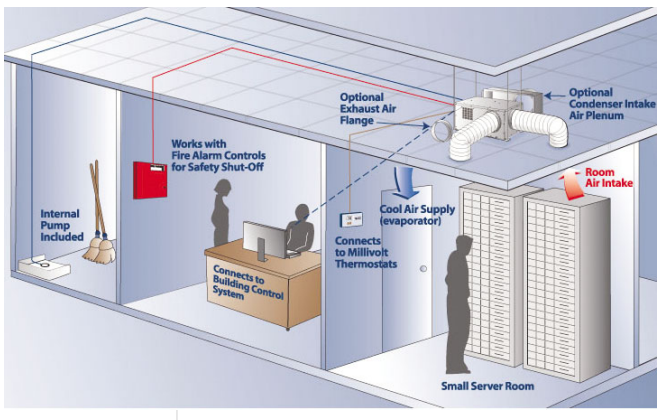
SPOT COOLING IS an energy-efficient alternative to central air conditioning. But often the main roadblock to efficient cooling of cramped server telecom and equipment rooms is the lack of floor space to accommodate a roll-in portable spot cooler. The MovinCool CM12 offers a convenient solution: It's a lightweight, space-saving, easy-to-install ceiling-mounted unit.

The CM12 delivers 10,500Btu/H of cooling in a self-contained unit that mounts easily with off-the-shelf hardware. It connects to a standard 115V, 15-amp circuit.

The CM12 features the shortest top-to-bottom profile in the industry—only 15.5 inches—ensuring it will fit into nearly any drop ceiling. In addition, the CM12 comes with several cost-saving capabilities and safety features:

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- Works with fire alarm controls for safety shut-off
- Self-contained system requiring no refrigerant piping
- Built-in supply and return air flanges enable easy duct installation and improved air circulation
- Warning signals and alarms for condensation overflow and unscheduled shutdown can be wired to a central location
- A standard internal pump
- Mounting brackets designed for off-the-shelf mounting hardware

In addition to the CM12, MovinCool offers the Office Pro lineup of portable spot cooling solutions for low-temperature equipment cooling; the Classic and Classic Plus Portable Series for harsh environments; and the PC7 Portable Air Conditioner for individual hot spots.



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Fully-integrated GigaStorATX 1GbE and 10GbE controllers conform to the ATX form factor specifications, providing a cost-effective performance-based iSCSI Storage System.

The Solution

For VAR's and System Integrators that require a vendor-provided enclosure, iStor offers the iS326 Solution. The iS326 includes the GigaStorATX System supporting eight ports of GbE or a single 10GbE for iSCSI connection, with capacity for up to 15 customer-supplied high-capacity sATA drives.



iS326

When it comes to high-performance, feature-rich, and cost-effective iSCSI RAID storage, iStor Networks solutions should be on your evaluation short list. iStor offers you the balance of price and performance that makes iSCSI IP Storage an obvious "YES" decision for organizations of all sizes or sophistication.

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POWER PROTECTION MARCH 30, 2007

Protecting Critical Data Center Loads

Staco TreStar P Series UPSes Eliminate Overloads, Flicker & More In Real Time

THE STACO TRESTAR P SERIES of UPSes is designed to meet the power protection needs of today's most sensitive critical loads. The P Series' new digital control system eliminates all overloads, frequency variations, transients, flicker, and blackouts in real time. And it processes signals 10 times faster than previous analog methods.

UPS reliability begins with design. With a true online, double-conversion design, the TreStar P Series isolates your connected loads from utility power and provides clean, regulated output voltage and frequency.



Staco TreStar P Series 125-150kVA model

The TreStar P Series was designed with the end user in mind. It offers the highest quality, along with the reliability you expect. It is easy to install and has a user-friendly front control panel with an easy-to-read LCD menu. Its advanced battery management system reduces the frequency of maintenance and replacement schedules, saving you time and money.

Staco's TreStar P Series comes in two versions: 125-150kVA and 180-225kVA. The 125-150kVA is parallelable for capacity or redundancy, with up to eight modules, and features a 0.9 output power factor, vector-controlled IGBT inverter, input circuit breaker, internal maintenance bypass, advanced battery management, and an optional 7% harmonic filter.

In addition to all the features found on the 125-150 model, the 180-225kVA model also features state-of-the-art communications, matching battery cabinets with internal disconnect, top and bottom cable entry, and a standard 7% harmonic filter.

Other optional features include:
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- External Maintenance Bypass
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- Network Solutions software
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Staco TreStar P Series

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Product Releases

Continued from Page 17

Wireless

■ **Firetide** released Firetide CPE (Customer Premises Equipment), which extends the reach of outdoor wireless mesh networks indoors. It's targeting the product at businesses that offer wireless services for small home offices and residents. The CPE supports WPA and WPA2 wireless encryption and is available in indoor and outdoor versions. The outdoor version is PoE (Power over Ethernet)-enabled and has a rugged build. It can stand on rooftops or in outdoor hallways, while the indoor version can penetrate thick walls. Users can use Firetide HotView Pro to offer end customers guaranteed throughput and will be available in August.

END NODES

KVM & Console Access

■ **Adder** has released AdderLink ipeps (IP Engine per Server), a program for high-performance KVM over IP. The company says the app offers a secure, nonblocking approach for computer management that's housed within a palm-sized unit that uses Adventiq Inside on-chip KVM-via-IP technology. The unit requires no additional power other than what a PS/2 or USB keyboard and interface provide, letting businesses rackmount the device without tapping into existing power resources. Additionally, Adder.net enterprise management software can provide centralized and secured management to let users connect to any device with a mouse click. The device offers AES 128-bit encryption and the RSA 2,048-bit public key authentication standard, as well as RealVNC for ciphered user communication creation. Further, users can transfer files via IP to the AdderLink ipeps and to a target computer via USB virtual media ports.

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■ **Aten's** new KH98 is an 8-port KVM switch that offers IPMI (Intelligent Platform Management Interface) 2.0 monitoring from a single point. The switch is cascadable, so up to 73 of them can be connected together to maintain up to 512 remote systems. The KH98 sells for $499.95.

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■ The new Dominion KX II is a next-generation KVM-over-IP switch from **Raritan**. Able to support 1,600 x 1,200 resolutions on remote systems, the KX II features redundant power supplies and Gigabit ports for failover protection. Raritan also includes its Universal Virtual Media technology to assist in access to storage media on remote systems. There's much more, including 128-bit AES and strong password support. Prices start at $2,995.

Server Appliance

■ **ArcMail Technology** has launched ArcMail U3120, a mail archiving and management tool. ArcMail U3120 helps companies archive business data, meet regulatory compliance, follow laws and statutes, and increase productivity and provides onboard storage for 2,000 to 5,000 users. ArcMail U3120 performs transparently in the background. It has a Web-based interface for searching and retrieving data, regardless of whether an administrator is in the office or at a remote location. Outlook can launch ArcMail U3120 directly, which is rack-ready and offers 12TB of storage. The appliance gathers all inbound, outbound, and internal email and indexes the email header and text.

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■ **MailFoundry** released the MailFoundry 9100 antispam appliance, which supports 20 million emails and 100,000 users per day. It includes the Mail Foundry MessageIQ 3.0 antispam engine and also protects against other threats, such as viruses and phishing attacks. Because it's not built into custom hardware configurations, the appliance offers scaling capabilities.

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■ **Secure Computing** says that with the addition of its TrustedSource global reputation system, its SnapGear "network-in-a-box" appliance now offers enterprise-class, reputation-based spam protection. Also on board are enhanced VoIP functionality, VPN offloading, connection tracking snapshots, language customization, and improved performance. There are six SnapGear appliance models to choose from, with prices starting at $249. Existing SnapGear customers can try out SnapGear with TrustedSource for six months free.

Storage

■ **Asempra** has announced Business Continuity Server 2.5, which offers real-time data recovery and management for Windows-based servers. This latest version now includes VMware support, Microsoft clustering support, tape integration, removal of backup windows, improved scalability and performance, and support for Vista clients. BCS 2.5 is application-aware and file-based and uses Virtual On-Demand Recovery technology to provide global to granular recovery. It can recover individual files and messages or entire data centers and protects Windows file servers, SQL, and Exchange. The product also integrates with Tivoli, Symantec, Veritas, and Legato/EMC tape backup infrastructures. Pricing starts at $15,000.

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■ **Stratus Technologies** announced the ftScalable Storage system, a compact array configurable up to 10.8TB of data storage. ftScalable storage has end-to-end redundancy including hot-swappable RAID arrays, power supplies and fans, as well as extensive environmental monitoring, rolling firmware upgrades, and online RAID expansion. Hardware RAID levels supported include 0, 1, 3, 5, 10, and 50. Designed for space efficiency, the storage subsystem's 2U chassis accepts up to 12 low-profile 3.5-inch SAS drives and up to three chassis enclosures for a maximum of 36 drives. The system's DupliCache technology provides better cache performance over conventional methods. With DupliCache, write data received from the host to the first RAID controller is mirrored to the second controller in an active-active pair. The RoHS- and WEEE-compliant ftScalable array uses new EnviroStor super capacitor technology for 100% data protection during power failures.

Components

■ **Mellanox** released ConnectX EN Dual-Port 10 Gigabit Ethernet adapter chips and NICs, which have a PCI-E x8 host interface. According to Mellanox, ConnecX EN-based clustered database and Web infrastructures use less power and are less complex than those that use multiple Gigabit Ethernet or Fibre Channel connections. The ConnectX EN adapter supports an extension to 802.3x IEEE PAUSE for better traffic rate control. It also offers support for VMware and Xen-base equipment and has features that complement AMD and Intel's virtualization technologies. Other features include the ability to spread traffic evenly across multiple cores or virtual machines and 17.6Gbps bidirectional throughput. The adapter chip with integrated XAUI, CX4, KX4, and XFI interfaces is available for $182. The NIC supports dual CX4 copper 10GigE interfaces and is available for $405. Customers can contact Mellanox for pricing on NICS that support fiber SR and LR XFP module connectivity.

Product Releases

SOFTWARE

Network & Systems Management

■ **Barracuda** says that its Barracuda Web Filter now offers in-depth reporting capabilities in addition to its existing filtering features. The reports are intended to give businesses better insight into Web usage. Available criteria include user behavior, traffic patterns, domain requests, site categories, and log history. The new reporting capabilities are free to current Energize Updates subscribers via firmware release 3.2.

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■ **Bomgar's** latest version of its remote support program includes new functionality via a Jumpoint tool, which enables remote access to unattended PCs without having to install a client on each machine. The tool is now in beta and will be available this fall with the release of version 9.4 of Bomgar's remote desktop control appliance. Nathan McNeill, Bomgar's vice president of product strategy, says, "If you've got 10,000 PCs you need to access and they're on 10 separate networks, you would install 10 Jumpoint clients on each of those 10 networks." Bomgar has a Releases Version 9.3 Webcast available, as well as beta software for testing.

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■ **Crow Canyon Software** has announced its CCS Network Inventory, an automated IT asset and inventory application for Microsoft-based networks. Features include auto-discovery of PC and non-PC assets, software license management, and integration with Crow Canyon's Help Desk application. In additional to giving IT administrators better management control over their environments, CCS Network Inventory offers detailed scan operations on all nodes on enterprise networks for gathering various data on machines, configurations, and software. Additionally, the application provides a one-click scan function for gathering data about remote machines without installing client-side apps. Crow Canyon says the application will greatly improve software license management, hardware and software upgrade management, and support resolution times.

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■ **Meru Networks** announced a location tracking and device management application for enterprise customers. The Meru E(z)RF High-Fidelity Location Manager application, which is part of the Meru E(z)RF Application Suite, adds a layer of physical location-based security to wireless LAN networks. The Location Manager self-calibrates and uses Meru WLAN to collect the data it needs for location and security capabilities. It detects clients within 5 to 15 feet and lets administrators define multiple perimeter zones, each of which can have its own security policy. The Location Manager prevents unwanted devices from interfering with network operation. The High-Fidelity Location Manager costs $13,995.

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■ **NetCordia** announced real-time analysis capabilities for the NetMRI network management solution. NetMRI provides real-time analysis of network configuration, performance, application flows, and policy. The software utilizes Netcordia's deep network domain expertise to better understand the interworking of the network infrastructure and improve business uptime. NetMRI's real-time analysis lets customers determine how to respond to issues and confirm the results. Netcordia integrates the real-time features with a search capability to provide NetMRI users with insight into network events. NetMRI also added application flow analysis to provide a real-time application perspective to network issue troubleshooting.

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■ **NetScout Systems** released nGenius Analytics Version 1.2, software designed to enable proactive network management. nGenius Analytics includes features to proactively monitor VoIP quality metrics, increases in the volume of previously undefined traffic, application response time increases, and application utilization decreases. The software alerts network managers and lets them research into application and conversation flow details, or into the packet sequences to diagnose the problem. Version 1.2 passively monitors jitter to analyze VoIP quality metrics.

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■ **Opsware** announced Opsware Server Automation System 6.5, an upgrade for software that automates the life cycle management of physical and virtual servers. It offers functionality and integration with the Opsware Process Automation System, and the software supports Windows and Linux. Server Automation System 6.5 automates day-to-day operational activities, such as server provisioning, compliance, updates, and application configuration management. It also automates the task of setting and enforcing regulatory and best practice standards to display visibility into server, software, and application configuration for regulatory compliance. Server Automation System 6.5 integrates with Microsoft Windows PowerShell, and it can manage servers running Red Hat Enterprise Linux 5.0.

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■ **SCO** announced HipCheck version 1.0.3 with real-time systems mobile monitoring and intervention functions for system administrators. HipCheck monitors and manages additional Unix, Windows server, and desktop operating environments from a number of Windows Mobile, Pocket PC, and Palm OS-based smartphones. Version 1.0.3 also supports Microsoft Windows 2000, Sun Solaris, and SCO UnixWare 7.1.1 through 7.1.3. Hipcheck allows system administrators to perform functions, such as rebooting servers, executing command lines, and managing user accounts, from a mobile device. If a condition requires attention, HipCheck sends an SMS or email message in real time to an authorized technician's mobile phone.

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■ **Shunra** released Shunra VE 5.0, network simulation software that features root cause analysis to find production-related performance problems before deployment. Shunra VE 5.0 provides critical analysis capabilities to help users make informed decisions about distributed application performance, service levels to remote end users, and infrastructure investments. It tests networked applications with root cause analysis, which produces reporting capabilities with drill-down metrics for each individual transaction. Shunra VE 5.0 also features VE Transaction Manger to measure and document each transaction's response across remote locations or across different network technologies. Metric thresholds let the software trigger alternative routes in network simulation.

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■ **Stampede Technologies** released Stampede Multi-User Client software to provide an alternative to installing and administering hardware at remote locations or installing client software on every remote device. The software supports either Windows- or Linux-based devices, and can be installed on existing hardware. The Multi-User Client integrates with the Stampede Application Acceleration Series to improve performance and productivity as well as reduce bandwidth utilization. When a browser connects through the Multi-User Client, customers will benefit from shared local caching and cache differencing, as well as the traditional Stampede acceleration techniques.

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Go to Page 20

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Product Releases

Continued from Page 19

■ **10-Strike Software** announced LANState Pro 3.4 for network management and administration over a Microsoft Windows-based network. The software includes a network device status monitor for viewing a real-time, graphical representation of a network's current state. LANState Pro performs periodic device polling, network mapping, and device pinging. It can also monitor disk space, check MAC addresses, and monitor SNMP. Through network mapping, LANState Pro can improve the performance of a network and improve access speeds. A free download is available, and the cost to register the software is $249.95.

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■ **Uplogix** announced version 3.2 of Envoy and the EMS (Envoy Management Station), which together deliver an optimized console management solution to support Solaris 10 OS server platforms. Many enterprises rely heavily on OBM (out-of-band management) tools for remote access to and management of Solaris servers, as well as other critical IT infrastructure devices. However, customers now have a need for sophisticated access and authorization controls to comply with internal security and external compliance requirements, which traditional OBM tools have failed to deliver. The 3.2 product release addresses the need for sophisticated access and authorization controls to comply with internal security and external compliance requirements. Uplogix also set a new standard for the secure management of Solaris platforms by ensuring that client/server communication is encrypted and secure, ensuring that users are authorized and credentialed and making sure every remote Solaris session is properly terminated. Uplogix logs all console and user activity and offers compliance reporting for Solaris sessions.

Security

■ **AEP Networks** has announced the release of AEP NSP (Netilla Security Platform) 5.6, which it says is the industry's first and only SSL VPN that includes integrated load balancing for geographical site failover for business continuity. With the 5.6 release, geographical load balancing has been enabled to provide load sharing and failover among independent NSP clusters in geographically diverse data centers. The feature is configurable through the enterprise as active-active for organizations. AEP Networks says the global solution is aimed at large-scale, multi-site deployments supporting thousands of concurrent users. The company is targeting midtier and large global enterprises for remote access and application security. The release includes the DRDL (Disaster Recovery Demand Licenses), a new service that offers customers wanting to increase license capacity on short notice (minutes or hours). Release 5.6 is now in beta and will be available early next month.

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■ **Apani Networks** announced EpiForce 3.0, the latest version of the company's security software. The latest version provides centralized and dynamic management tools and offers virtual segmentation of a network so that it does not require any physical alterations to the network. The software provides selective encryption based on criteria set by the system administrator. Policies may be enforced by the user, regardless of the machine or access point used. EpiForce supports most OS platforms, network applications, and hardware devices. The software's new features include centralized, dynamic policy control, direct integration with Active Directory, auto agent registration, and new reporting capabilities.

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■ Outpost Pro Security Suite v. 2007 is the latest group of security apps from **CenturionSoft**. It's based on Agnitum's Outpost Firewall Pro, with the addition of anti-malware, antispam, ID and sensitive information antitheft, and self-protection protocols. OSS 2007 is compatible with Windows x64/2000/XP/2003 Server, but Vista isn't mentioned. Pricing is set at $49.95, including a year's worth of updates.

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■ **Intoto** has announced the beta release of IntruPro IPS, an intrusion prevention system for SMEs. Intoto's software is network-centric and will be available as a free download from www.openintoto.com. IntruPro can work with x86 server hardware to create a security device. IntruPro IPS stops attackers from taking advantage of vulnerabilities in a network. It also harnesses internal users' privileges. Intoto has also provided network monitoring and multiple detection methods, including signature detection, protocol anomaly, and traffic anomaly. It also provides alerts to administrators and can pinpoint bandwidth-intensive applications, including P2P and IM.

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■ **Reflex Security** announced enhancements to Reflex VSA (Virtual Security Appliance), intrusion prevention software for virtualized server environments. One of the primary enhancements is the utilization of RSPPA (Reflex Security Parallel Processing Architecture), which lets users of Reflex VSA secure their virtual networks while maintaining performance. RSPPA is a scalable software platform that can use multi-core processing technology, and it auto-detects the presence of "virtual CPUs" to provide performance gains. The Reflex VSA includes features for identity-based Network Access Control, firewall protection, protocol anomaly detection, antispyware, and antivirus. The software also provides features for risk management, including attack detection, intrusion prevention, business continuity, and disaster recovery.

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■ **Stonesoft** released intrusion prevention software StoneGate IPS (Intrusion Prevention System) 4.0. The software offers Windows network protocol analysis, VoIP traffic security (with SIP protocol inspection), and protection against illegal input and network traffic flood DoS attacks. Stonesoft is targeting StoneGate at enterprise customers. The software can block attacks using the evasion technique the CERT Coordination Center identified. The software also identifies spoofed traffic and weeds it from legitimate traffic. Customers can use the StoneGate IPS to segment internal networks, which protects them in the event of a breach by an attacker or worm. IPS offers deep inspection for the SIP protocol that is used in VoIP and network traffic normalization.

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■ **Websense** introduced software designed to protect organizations from suspicious Web sites. The new Websense Web Security Suite 6.3.1 uses the preemptive classification intelligence in ThreatSeeker technology to provide organizations extended protection from potential Web security threats. Specifically, Websense gives customers access to its advanced Web Reputation system in the form of three new Web site categories available to organizations

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Product Releases

using Websense Web Security Suite. The new categories protect from Web sites that are hosting known and potential exploit code and Web sites likely to contain little or no useful content, including sites hosting spam accounts, domain parking, and click-fraud sites. The categories also protect from Web sites that camouflage their true nature or identity and Web sites that include elements suggesting latent harmful intent.

Storage

■ **Adaptec** released the latest version of the operating system that runs its Snap Server network storage systems. The GuardianOS 4.4 includes data protection software for PCs and servers, replication software for data collection and protection, and new file and print services. The OS' Data Migration Utility lets users transfer data from CIFS or NFS-based systems to a Snap Server. It also verifies that the installation completed with problems and produces a report of moved files and folders.

GuardianOS also offers iSCSI support for up to 255 LUNs and spec-compliant IQN names. It also offers backup and restore functionality for Snap EDR (Enterprise Data Replicator) Management Console settings and provides a command-line interface for managing Snap Servers. The GuardianOS also lets USB printers connected to a Snap Server share with Windows, Linux, Macintosh, and Unix. Support for USB tape drives and integrated BakBone NetVault data protection software are other highlights.

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■ **Snap Server** customers with Extended Care Plus, Bronze, Silver, or Gold service plans can upgrade their GuardianOS operating systems to version 4.4 free. Snap Server customers who don't have a service contract can start one for $199.

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■ **Datawatch** released Datawatch|MailManager, an enterprise-level email archiving system for Exchange environments. The application is aimed at helping companies maximize their email storage efficiency, manage email life cycle, and meet regulatory and e-discovery requirements. The application automatically captures and archives all email and attachments, with only one copy of messages being stored to improve performance and reduce storage requirements. Additionally, the app provides HSM (hierarchal storage management) through automatic migration of old messages to secondary storage or deleting messages in accordance with enterprise policies and regulatory requirements. Further, Datawatch|MailManager lets users create a legal case and assign messages from the app's search client. Messages assigned to specific cases can't be deleted, even if the retention period for messages has expired.

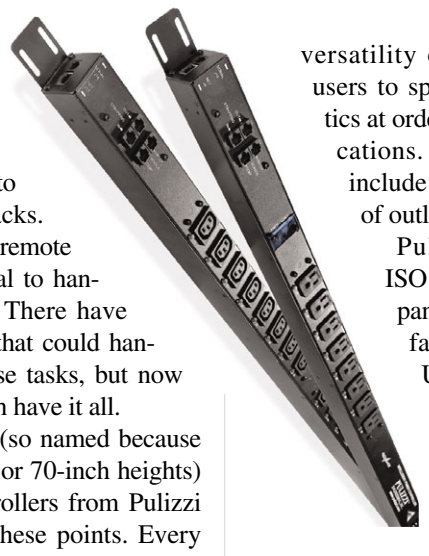
Telephony

■ **CounterPath Solutions** introduced Bria 2.0, a multimedia communicator and VoIP softphone client application. Bria 2.0 provides many new customization features to CounterPath Multimedia Communicator products. Bria 2.0 combines voice, video, IM, and presence management. It offers end users a contact-centric interface and deskbar capabilities. Service providers will find increased branding options and a greater advertising reach. Bria 2.0 is compatible with Windows 2000/XP. Future versions with support for Vista and Mac OS X are also planned.

POWER MANAGEMENT — APRIL 27, 2007

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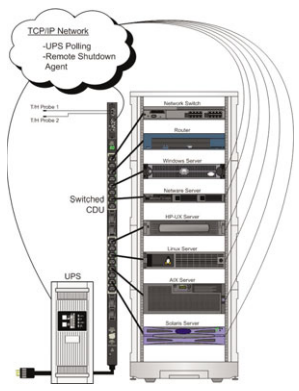
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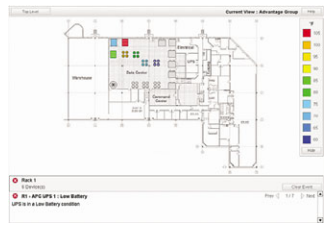
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24 Receptacle Remote Power Monitoring & Distribution

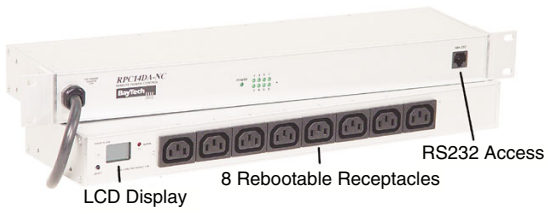
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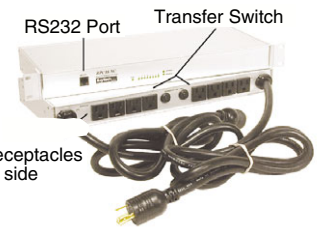
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OPINIONS
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Microsoft's DisConnect

I spent the last few weeks digging into ADO.NET 3.0's Synchronization Services that's included in the new Visual Studio 2007 (Orcas) Beta 1 drop. In the ramp-up to the Orcas release, due out sometime this year, we're likely to see more beta drops of code and documentation as the product features solidify or drop off into the bit bucket kept in the cellars beneath the building.

Lately there was a resounding "thunk" as the proposed EDM (Entity Data Modeling) was sliced off the list of shipping features. Frankly, I think this is good news for developers and architects, as it goes beyond what Microsoft should be doing, given the long list of features it has yet to complete and repair from earlier versions. Sure, I expect there are developers out there who want to use data modeling to help design complex applications, but I also know there are several established players in this market. Should Microsoft try to help them or steal their market share to cater to a small fraction of the developer community?

Submitting Bugs Down A Rat Hole

During the Community Tech Preview and Beta cycles, it's important for developers and pundits alike to try the new bits. Catching the bits early in the cycle is like going into a house you intend to buy and creating a checklist of things you would like to see repaired before you drag your furniture out of the truck. Microsoft tells us that it encourages developers to post suggestions and bugs against these bits; too bad the program it uses to capture this (extremely valuable) feedback is crude at best.

While Connect is Microsoft's official portal to submit bugs and suggestions, the home page does not have any link to Enter New Bug Or Suggestion; you have to choose Available Connections and find your product in the list provided. Fortunately, if you're already running Visual Studio 2005 or one of the Orcas Builds, you can click Community | Feedback to be taken directly to the appropriate Connect repository—but that's when the fun stops.

Understandably, you're first prompted to search to see if your issue has already been reported. Unfortunately, Microsoft's search engine is pretty challenged, so it's often impossible to tell if one or 1,000 people have already complained about your bug. Assuming you go ahead anyway (like I do), each and every time you log a new bug, you're asked a set of anal questions that (apparently) categorize your feedback to make Microsoft's job easier. These include questions tantamount to "Do you still speak <English>?" and "Are you still working with <Visual Studio> and <XP> and the <English> version of XP?" No, Connect does not remember the answers you gave the last 50 times, as you dutifully try to get your bugs reported. The rest of the ASP form almost makes sense as it captures a description, repro steps, actual results, and expected results.



WILLIAM (BILL) VAUGHN

AUTHOR *William (Bill) Vaughn is an industry-recognized author, mentor, trainer, and subject-matter expert on Visual Studio, SQL Server, and ADO.NET. He's worked in the computer industry for over 30 years, including 14 years at Microsoft. He's written seven editions of the "Hitchhiker's Guide to Visual Basic and SQL Server" and three editions of "ADO.NET and ADO Examples and Best Practices." Vaughn and Peter Blackburn also wrote the best-selling "Hitchhiker's Guide to SQL Server 2000 Reporting Services." Visit his Web site at www.betav.com.*

The Canned Responses

Once I submitted my bugs, it did not take long for Microsoft (or a program) to respond to acknowledge my report. And not long after that (in virtually every case), a Microsoft person (or program) discounted my efforts to help as "not reproducible" or asked for additional information that was already in the original report.

After some queries with my peers, I discovered that I was not alone. In one account after another, I was told how bugs that were clearly serious and easily reproduced were discounted as "by design" or "not reproducible," or the Microsoft person working the list of bugs made a furtive attempt to follow the reproduction steps. I told them to ". . . create any rowset-returning stored procedure and run it." They countered, "What stored procedure causes this problem?"

I summarized this research to my contacts at Microsoft. I heard that while the Visual Studio team does not control how Connect is implemented, they are extremely interested in getting feedback on Visual Studio Orcas and the shipping versions. They also assured me my "encouragement" (and that of other developers and MVPs) has put considerable pressure on the Connect team to get the ASP tool fixed.

During this discussion (over several days), a number of suggestions were made to make it easier for Connect to know what the developer is doing and the other classification bits. Nope, I doubt if any of these changes will be incorporated before I retire. I do know that if Microsoft really wants our help to make its products better match our and our customers' needs, it had better get the wax out of its Connect.

Microsoft says it encourages developers to post suggestions and bugs against these bits.

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Restoring Trust To Email

Authentication Protocols Gaining Popularity

by Kurt Marko

• • •

Email is both one of the most important business communication tools and most abused. Originally designed as a convenient method of passing messages between researchers and academics, the simple, open nature of Internet mail undoubtedly contributed to its rapid adoption and ultimate ubiquity. These same qualities have proved to be an Achilles' heel as email has evolved from an esoteric tool of the cognoscenti to a mass media communication channel, leading to the scourge of mass unsolicited email that continues to threaten email's viability as an effective tool.

One of the key omissions in the standard for email transmission that most malignant spam exploits is the inability to verify a sender's identity. Email-spread phishing attacks routinely spoof their sending address to trick unwitting recipients into opening a message and following its malicious instructions.

While spam-filtering software has become adept at identifying these forgeries, it does so by brute force, typically through a message content database or statistical analysis of keywords. Thus, it's been obvious for some time that a method for signing and authenticating email was necessary. An early attempt, the S/MIME standard, was developed years ago to provide end-to-end, sender-to-receiver encryption and email signing; however, its implementation is complex and difficult to use. A more modest but still effective solution is to sign email at the organizational level before leaving the email gateway, thus providing some assurance a message originates from a trusted source. Such near end-to-end message integrity is the goal of a number of new email protocols, most notably DKIM (DomainKeys Identified Mail).

Problems Addressed By Email Authentication

One of email's pioneers, Eric Allman, chief science officer at Sendmail and a principal architect of DKIM, notes that the primary goal of the protocol, and email authentication more generally, is to restore trust to the mail system. He points out that email was developed before the strong authentication technologies were even invented and that this inability to verify the identity of senders is routinely exploited by scam artists using phishing techniques.

S/MIME, an earlier attempt at end-to-end email security providing public key-based signing and encryption, hasn't achieved wide adoption, primarily, as Allman puts it, because it introduces too much "friction" into the email system. That is, it depends on end users actively thinking about security before sending a message. DKIM circumvents these technical hurdles, insulating end users from the intricacies of public key management by performing email address signing and validation at the MTA (message transfer agent) level, before end users ever see the message.

Ajay Goel, owner of JangoMail, a Web-based email marketing service, notes that authentication protocols generally, and DKIM specifically, enhance traditional email in several key ways. First, recipients of signed mail can verify the sender's identity, thus eliminating phishing schemes based on forged sender addresses. Furthermore, recipients who know a sender always signs email and who subsequently receive unsigned mail putatively from that sender can assume the mail is fraudulent.

Thus, email signatures can be used as a factor in spam filtering and, as Allman points out, significantly enhance the odds of correctly identifying spam. By way of example, he says about 80% of email is spam, positing that 90% of "good," desired email is from known, trusted sources. If email from trusted sources is validated by DKIM and removed from the spam scanning pool, content scanners can be much more aggressive in examining the remaining email trying to find that final 2% (10% of 20%) of good email.

If email from trusted sources is validated by DKIM and removed from the spam scanning pool, content scanners can be much more aggressive in examining the remaining email.

Another advantage of DKIM Goel cites is temper resistance. Because the protocol attaches an encrypted hash "fingerprint" to the headers of each signed message, recipients can verify whether a message has been altered during transmission. A final benefit of email authentication, according to Joel Smith, CTO of managed email service provider AppRiver, is the ability to prevent so-called "Joe Jobbing," that is, the hijacking of a legitimate email address by spammers. He notes that victims of this form of identity theft are frequently deluged with unwanted replies or bounce messages ("backscatter") that can severely tax their mail servers.

Authentication Protocols & Standards

Besides DKIM, which is the successor to the DomainKeys system originally developed by Yahoo!, the other major email authentication scheme is SenderID and its affiliated protocol, SPF (Sender Policy Framework).

Although DKIM and SenderID/SPF are often viewed as competitors, Sendmail's Allman doesn't see it that way and says it makes sense to use both, an opinion shared by Goel of JangoMail, who points out that his service indeed supports both systems. While Allman believes that the encrypted key pair technology DKIM uses is inherently more secure and trustworthy than SenderID's technology, he notes that neither scheme is without its drawbacks. For example, Goel points out that SenderID can break when forwarding messages, making it look as if the message didn't come from

Go to Page 26

Products Supporting DKIM

Company	Software Package	Signing	Validation	DNS Records
	Software			
ALT-N www.altn.com	mdaemon libdkim	Yes	Yes	Yes
Port25 www.port25.com	PowerMTA	Yes	Yes	No
Postfix www.postfix.org	Postfix using dkim-milter or amavisd-new	Yes	Yes	No
Sendmail www.Processor.com/Sendmail-Inc	dkim-milter	Yes	Yes	No
	Service			
AppRiver www.Processor.com/AppRiver	Exchange Hosting Service MTA Services for ISPs and partners	Yes	Yes	n/a
Citrus IT www.citrus-it.co.uk	CitrusMail	Yes	Yes	Yes
Innovyx www.innovyx.com	Dialogue 1to1	Yes	No	Yes
JangoMail www.jangomail.com	JangoMail	Yes	n/a	n/a

Signing: Performs message signing
Validation: Performs signature validation
DNS Records: Supports DNS administration to add DKIM key records, with TXT records in a _domainkey subdomain

Source: DKIM.org; Additions By The Author

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Patch Panel Technology

Intelligent Cabling Management Can Solve Many Connectivity Problems Before They Happen

by Bruce Gain

• • •

Cabling management is often low on the priority list of IT admins—until there is a problem. Sometimes, the wrong offices are connected to a server, or a technician inadvertently unplugs a critical data center cable. Troubleshooting can be a long and complex process, requiring slow manual checks to pinpoint the problems.

Networking cabling infrastructures are also becoming increasingly complex, with additional cabling required to boost network data speeds and to accommodate new data center applications, while management seeks to lower IT costs and to improve efficiencies. Each time a network's cabling is upgraded, there is even more room for human error—and downtime.

However, an automated process that monitors cabling and detects problems can take a lot of the pain out of cable management and troubleshooting. This is where patching technology comes in, which can track where cables belong, send out alerts when an unauthorized or erroneous move has been made, and offer other cable-management options. The real-time monitoring of your cabling connections also aids in the day-to-day management of the data center, keeping admins up-to-date about a network's connections status. IT managers save time that's required to perform moves, adds, and changes within the data center.

"Often, the only time you hear about cabling is when there are problems or when it is time to upgrade infrastructures," says Luc Adriaenssens, senior vice president of R&D and technology for CommScope Enterprise Solutions. "Patching technology simplifies tasks and makes [admins] less prone to errors when it comes to connecting cords. So from a reliability standpoint, it gives you more assurance of doing things correctly."

Real-Time Cabling Status

Patching technologies largely involves the automation of patch panel labeling and signaling. Often, panels are labeled manually, with physical paper records attached that communicate the cabling configuration and connections and where the cabling goes to. Manual labeling also, of course, leaves more room for human error.

Not all admins' networks necessarily require intelligent patching, though. Patching technologies are generally not recommended for networks with fewer than 100 users with normal network requirements, says Moshe Sedero, enterprise products director for Israel-based RiT Technologies. "For big organizations it is a must," Sedero says. "With organizations with, say, 300 or more users, cable management becomes a huge issue."

While patch technology is not necessarily the Holy Grail for cabling documentation, it can serve as an invaluable tool for enterprises with a dynamic environment and limited control over the network, especially when network infrastructures are updated or moved, James Sherrin, vice president of product management at iTRACS, says. "Simply put, patching technology allows administrators to further remove the element of human error from their change process."

The Patching Menu

At a minimum, patching technology can offer LCD screens and LEDs that indicate which rooms or servers cables are connected to, connectivity status, and other information. More sophisticated patching systems not only more proactively communicate connectivity status but can guide technicians about what they must do and where to go.

With an active patch panel, some physical labeling may be used, but most communications are guided by an LCD screen, which is integrated to PDAs with messages that might say "Go to this wiring closet where there are three work orders waiting for you there," Adriaenssens says.

A technician might go into the wiring closet where there are six racks side by side, for example, and find pending work orders on panels with LCDs flashing on them to direct the technician to the rack. There, by pressing a "pending jobs" button, the software interface in the panel describes where a cable, with a specified length, needs to be connected, says Adriaenssens. "You then get an audible confirmation that the cable was put into the right jack or an audible confirmation that says, 'Thank you for completing job number one,' and then it goes on to job number two."

Each time a network's cabling is upgraded, there is even more room for human error—and downtime.

The process is not fully automated, though, in that you still have to send the technician to the wiring closet. Maybe one day implementing or adding cabling will become robotically controlled, but that was not an option vendors cited in this article plan to offer anytime soon. "Patch assistance does, though, virtually eliminate the likelihood of having errors when cabling," Adriaenssens notes.

Cabling monitoring can also serve as security applications. Black-hat hacking activity is not just limited to over-the-Internet attacks, illegal Wi-Fi access, or other intrusions, of course. Intruders can also gain access by physically hacking cables. To prevent that from happening, RiT Technologies bundles intrusion detection software with its patch management tools. "Hacking is something done physically, too, so whenever there is a broken link, an immediate alert is sent out," Moshe says. "Or with device authorization, only authorized MAC addresses are allowed to access a connection. If non-authorized IP addresses attempt access, you are alerted, and the exact IP address of the attacker and its physical location is provided."

The 99.999% Reliability Factor

For networks and data centers that absolutely cannot go down, some admins might seek to achieve what is known as 99.999% reliability. Such a goal, of course, is a major challenge, regardless of resources. Intelligent cable monitoring then becomes more crucial, as it represents one of many ways that can help to eliminate error and, consequently, downtime.

For enterprises with the 99.999% reliability goal in mind, patching technology is particularly important during MAC (moves, adds, and changes) activity, which is an error-prone process. Adding new infrastructures or moving a network, according to a CommScope Enterprise Solutions survey, generally results in an 11% cabling error rate without patching technology. During MAC activity, technicians are especially likely to disconnect a crucial cable, connect the wrong office, or make other mistakes.

Patching technology is, thus, particularly tailored to reduce the error rate during MAC activity, says Adriaenssens. "Sophisticated systems exist that are catching on very rapidly for data centers and users that have a lot of experience with the real world of MAC activity," Adriaenssens notes. "If you look at the percent of time that is done correctly, [without patching technology], the initial task is initially done correctly only 89% of the time."

Patching Technology Offerings

Intelligent cabling management falls under the "emerging sector" category, while the number of vendors remains limited. Still, at least three firms currently offer solutions, and more will likely follow to keep up with increasing demand.

CommScope Enterprise Solutions
Labeling software and patch panels
www.commscope.com

iTRACS
Real-time physical layer management software
www.itracs.com

RiT Technologies
Infrastructure monitoring and management software with added security features
rit.co.il

Do You Need Intelligent Cable Monitoring Systems?

Patching technology is a high-powered tool that automates cable monitoring and troubleshooting, but it is not necessarily for every enterprise.

Pros	Cons
• Helps to prevent the wrong cables from being plugged in or disconnected • Directly alerts admins when problems occur • Reduces errors when moving or upgrading infrastructures • Makes cabling troubleshooting easier	• Not necessarily appropriate for smaller enterprises with a limited infrastructure • Small number of vendors

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Enterprise Smartphone Protection & More

Different Approaches For Mobile Security

by Sandra Kay Miller

• • •

SMARTPHONES ARE WELL-DESERVING of their name. Most have more computing horsepower than desktop PCs that are more than five years old. Unfortunately, it's the people carrying the devices who do dumb things, such as leave them on the subway, in taxis, at the airport, or even have them stolen.

As smartphones are being deployed throughout the enterprise in record numbers, IT managers are scrambling to cover their mobile assets now that these devices, which are essentially miniature PCs, are so much more than just a phone. Users can access corporate email, intranet, business data, schedules, documents, and contacts by tying into the corporate network, as well as use mobile features such as SMS and instant messaging. Further increasing smartphones' appeal to the enterprise, applications such as CRM and ERP are being developed.

Previously, most smartphones were privately owned assets for connecting wirelessly to the Internet for mobile surfing or checking personal email. However, today smartphones are quickly becoming a mandatory tool in the enterprise. Every day more organizations are opening their private networks for Web-based access for their employees.

Driving the adoption (and increasing their security risks), Wi-Fi and Bluetooth connections have become commonplace on these devices, allowing them to connect to wireless public hotspots as well as within the corporate network for synchronization and wireless printing. The bottom line, however, is once a connection between the network and a smartphone has been established, that mobile device is now part of the network, offering employees similar access whether they are sitting on a commuter train or in a cubicle.

The Real Security Threat

Many of the first-generation mobile security products focused on malicious code and were spin-offs from the major antivirus vendors. Despite the growing threat from mobile malware, a major incident has yet to cripple millions of devices and steal private data, an occurrence that has become almost commonplace in the wired world.

However, data security has garnered the top spot for mobile devices, especially in the wake of regulatory compliance. Practically all of the leading mobile security solutions, such as those from PointSec, Bluefire, Credant, Trust Digital, and Mobile Armor, offer full encryption.

"We have the capabilities to protect mobile devices such as Palm, Windows CE, etc. Everything can be transparently encrypted," says Neil Larkins, product manager for PointSec.

Besides encryption, enterprise solutions include a centralized policy management server that lets administrators set up, deliver, update, and audit corporate-wide policies on their entire mobile device fleet, including endpoint devices such as USB flash drives and port control for mobile and stationary computing devices. For instance, Bluefire's Mobile Security Enterprise Edition even lets administrators block the camera function on mobile phones along with robust device integrity management. That means as soon as a smartphone goes missing, all incoming and outgoing network communication can be blocked. Not only is the data on the device safe, but also the ability to connect to corporate resources is prohibited.

But even before corporate networks and secured data can be accessed, many smartphone and mobile device makers as well as security vendors are integrating failed authentication with automatic device wiping. One too many failed login attempts, and the device automatically resets to factory default.

While malware might not be in the driver's seat on smartphones, that doesn't mean it's not going along for the ride. Much of mobile malcode pivots around SMS and Bluetooth. Carriers are becoming more aware of phishing schemes designed to add unwanted charges to the cellular bill. Basic firewalling and intrusion prevention measures are included in smartphone security solutions. One of the facets of the Mobile Armor suite is the MobileFirewall. It can function in a standalone posture on the device or be centrally managed through the company's PolicyServer. It works on both Windows Mobile and Microsoft Smartphone platforms.

More Than Security

While the security features themselves are the meat of these solutions, what elevates them into the enterprise league are their management and auditing features. As their name implies, mobile devices are always on the go, making it nearly impossible for administrators to physically manage individual devices. The number of platforms (Symbian [www.symbian.com], Palm [www.Processor.com/PalmInc], RIM [www.Processor.com/RIM], Microsoft [www.microsoft.com]), variety of handsets, and rapidly changing market make it difficult for organizations to implement standardized hardware, so having flexibility in a security solution is a big plus.

Credant Mobile Guardian Enterprise Edition offers broad support for multiple platforms, all managed from a single administrative console. Features such as over-the-air deployment and incremental policy updates mean that when a user loses his smartphone, he doesn't have to wait on an emergency overnight shipment from headquarters for a replacement.

As smartphone deployments increase, these solutions also let IT maintain a comprehensive inventory and decommission handsets on the fly. Losing a smartphone to a suddenly terminated employee is a small cost compared to the ability to rapidly and remotely wipe all corporate data from that smartphone as well as prevent any future use of the device as a corporately owned asset.

Enterprise smartphone security solutions do much more than just protect the devices themselves. They centrally manage security features and application and access policies; remotely deploy and decommission smartphones; and create full audit trails to meet regulatory compliance.

Where To Go For Smartphone Protection

Bluefire Mobile Security Enterprise Edition
Offers a variety of security features, including firewall, IPS, authentication, encryption, and asset integrity for Palm and Windows Mobile devices
www.bluefiresecurity.com

Credant Mobile Guardian Enterprise Edition
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Restoring Trust To Email

Continued from Page 24

the original sender. Allman notes that DKIM can similarly break when email is forwarded by an automated mailing list that appends list administration instructions to a message after it's been signed.

Products & Services Support

While email authentication technologies have been around for several years, controversy over the standards has limited their integration by software vendors and adoption by service providers. This is changing with the recent approval of DKIM by the Internet Engineering Task Force and the concomitant stabilization of the underlying protocol, leading a number of popular MTA products and email services to add DKIM support (see the "Products Supporting DKIM" chart on page 24).

While recipients of signed mail will find it relatively easy to incorporate authentication into their infrastructure (several popular consumer services such as Gmail and Yahoo! Mail already support DKIM), those wishing to sign messages are in for more work. Signers have to generate a public/private key pair, add the public key to their DNS entry as a TXT record, and make the private key available to the MTA software. According to Allman, domain registrars haven't developed a standardized interface for adding such auxiliary DNS records; thus, companies will have to work with their provider on a case-by-case basis.

Authentication protocols plug a key security hole in the Internet's inherently trusting email system. Subject to abuse by spammers and phishers, email was facing a crisis of confidence amid a flood of irrelevant, misleading, and sometimes nefarious messages. While authentication alone is no panacea, Allman feels it is a necessary step to restoring confidence and reliability to the email network.

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WHAT'S HAPPENING

The Big Open-Source Question

eRacks Is Nothing But Community Driven

by Chris A. MacKinnon

• • •

THE QUESTION USED TO BE: Should you use open source in your enterprise? Now the question is: How much open source do you use in your enterprise? IT managers have been pondering the open-source question for years now, but lately, open-source success stories are causing data centers to seriously consider the positive spin-offs from using these community-based systems.

If you ask Britta Serog, vice president of marketing at eRacks Open Source Systems (www.Processor.com/eRacks-OSS; a provider of open-source rackmount servers, desktop systems, and open-source services), she will give you the skinny on everything open source in today's enterprise. She says although open source is out there, there are challenges that go along with it.

Serog notes, "We see some of the biggest challenges being system component compatibility with open-source software as well as driver support. We do our best to fully research out all components and the interoperability issues for the open-source software that our clients select. We are also working on numerous 'cookbooks' for the installation of drivers to be made available to the greater open-source community."

As a snapshot from the current state of the open-source systems industry, Serog says it is interesting to note that Dell recently made an agreement with Canonical's Ubuntu to sell preinstalled Linux desktops. Serog says, "We have been preinstalling Ubuntu for years on our systems and officially partnered with Canonical late last year. The big players are only now just beginning to respond to the customer demand for systems that are optimized and preconfigured with open-source OSes." Serog says eRacks offers more OS choices than other vendors, including more flavors of Ubuntu, such as Kubuntu and Xubuntu, and even different versions.

eRacks' Angle

So why would IT managers be interested in eRacks' open-source stance? According to Serog, eRacks believes that a business owner shouldn't entrust important business processes on software (or hardware) that cannot be changed, upgraded, fixed, or edited freely. She says closed-source software upgrades and support could easily be lost if a software provider is acquired by another company or is otherwise taken in a direction not in the interests of the user. She reminds us of the PeopleSoft takeover by Oracle, as one example.

In Serog's opinion, eRacks has extensive experience in designing hardware to run open-source operating systems and applications. She says it's also got a great track record of customers who return to expand and upgrade their data centers. Serog continues, "eRacks' mission is to give control back to the business owners and managers so that they are not subject to hardware lock-in upgrades or restrictive software licenses. We enable business owners and managers to retain control by providing servers using open-source operating systems and applications and compatible industry-standard high-quality components."

eRacks uses only nonproprietary hardware components in order to give customers the most control over their servers. Serog says this way customers are not locked into purchasing upgrade components solely from eRacks. She says the big players don't always do this; HP, Dell, and Gateway are all known to use proprietary components in their desktops and servers. "This lock-in technique," she explains, "isn't restricted to the insides of systems, either. A few years ago one customer at a major Ivy League University complained that his Dell server wasn't even usable with the standard rack shelf. He was told by Dell that he had to purchase a Dell rack shelf or some special Dell Rackmount rail kit." Serog notes that all of eRacks' internal and external components, rack cabinets, shelves, and sliding rail kits are high-quality, industry-standard components.

One fact worth noting is that eRacks engineers have extensive experience, ensuring device and component compatibility. Serog says eRacks engineers run every server through a series of tests and are aware of specific hardware component incompatibilities. "eRacks engineers often design specialized custom systems and work with the customer to arrive at an optimal configuration. Like many other small businesses, eRacks is able to give its customers individual attention."

Standing Out

Another interesting eRacks tidbit that Serog points out is that the company offers the greatest number of open-source operating system choices (in preconfigured servers and desktops) of any vendor online. She says different operating systems are required or recommended for different applications. Serog adds, "We recommend OpenBSD for any server directly connected to the Internet because of its high level of security. eRacks will also install specified open-source applications, as well, going far beyond the typical operating system-only installation."

Serog says Penguin Computing and Pogo Linux are probably two of the better-known Linux hardware vendors that specialize in open-source operating systems. "However," she says, "their preconfiguration offerings are limited in only providing a few certain flavors of Linux and no open-source applications. Our customers are generally high-level network and system administrators who also request various BSD operating systems with specific requirements for servers, as well."

One thing that eRacks will be rolling out in the near future is a configurable set of software options, going deeply beyond the OS and even beyond the LAMP (Linux, Apache, MySQL, PHP) stack. Serog says this is something that other vendors are just now beginning to even think of offering. She continues, "We've also planned major updates to our online models, including a prebundled virtualized server set with various virtualization options, expansion of our water-cooled quiet rackmount servers and desktop systems, and a thin client and server setup for K-12 schools."

Serog says she has seen an unprecedented boom in the number of open-source systems providers over the past few years. Serog notes, "Clients report to us about builders out there that are not experienced in either the software or the hardware side and especially not experienced in the compatibility issues between the two." She says over the years eRacks has even written its own drivers, tested countless components, given feedback, and contributed overall to the open-source community. She says eRacks has also partnered with an up-and-coming high-level open-source consulting team, The Libre Group. Also, because of customer demand, the company has already made progress on putting together a hosting service.

THREE QUESTIONS

Building Servers The Way Customers Like Them

Servers Direct Sells, Supports The Configurations IT Asks For

by Daniel P. Dern

HEADQUARTERED IN CITY of Industry, Calif., Servers Direct (www.Processor.com/Servers-Direct) provides servers, server peripherals, and components to system integrators, resellers, and tech-savvy end users. The company says it is "the largest whitebox system builder to the Channel, and one of the largest Intel and Microsoft OEMs in North America."

The company's customers include data centers and IT professionals in Fortune 500 companies, small to midsized enterprises, government agencies, educational institutions, system integrators resellers, and tech-savvy end users. Increasingly, Servers Direct is targeting small-scale data centers in markets that previously had not had a server farm. The company also sells to independent software vendors that package Servers Direct's offerings as part of their complete solution.

Joe Toste is Servers Direct's vice president of marketing. "I've been in high-tech for nearly 25 years, in telecom companies like Digi International, where I was director of marketing and product marketing for 10 years. I've been at Servers Direct for about five years. I'm also vice president of marketing and sales for our parent company, Equus Computer Systems (equuscs.com), which is focused purely on channel sales (VAR, ISV, and OEM)."

■ What are the biggest IT-related issues facing today's small to midsized enterprise?

"Technology roadmaps are changing faster than ever," says Toste. "For their server technology, the question is, how do midsized companies decide what to buy and when, to get the best bang for their dollar?"

Also, says Toste, "Just improving performance is no longer enough. We see more and more, companies are trying to integrate improvements in technologies while also getting cost reductions. This includes categories of cost reductions we never had to think about before, like looking for technologies and products that reduce power consumption and reduce the size or square area required."

These are new kinds of metrics that Toste says midsized companies are asking about. "They're looking to find the best practices of enterprise customers," says Toste. "We see midsized customers asking for best practices more than ever and adopting enterprise best practices much faster."

■ What should *Processor* readers know about your company's products?

"We position ourselves as the online experts for Intel, AMD, and Supermicro server technology," says Toste. "When we were founded over five years ago, Servers Direct started out offering basic 1U and 2U rack servers for the data center while focusing on providing great service." Today, Servers Direct sells Intel- and AMD-based servers, blade servers, and HPC (high-performance computing) clusters, along with advanced whitebox storage products such as SANs, plus server peripherals and components.

"We take quality seriously," says Toste. "All Servers Direct server systems are manufactured under ISO 9001:2000-certified processes. With our one-year standard depot warranty, devices and parts get fixed at one of our facilities—customers don't have to send the malfunctioning part back to the manufacturer."

■ What makes your company unique?

"In this market of efficiencies and the Internet and products that look the same everywhere, it's the customers' experience that matters," says Toste. "We guarantee very high quality of service and customer satisfaction. Our motto is that 'Service Is First,' and we continue to expand our business based on the principle of ensuring this high-quality service. We do that by employing expert people and by leveraging Web tools for customer service."

Servers Direct also offers flexibility in product selection, Toste says. "As a whitebox server company that does integration, we can do very broad customization, offering customers choices, to get the product how they want it. That is pretty distinct from the branded server companies. We will integrate whatever the customer wants and guarantee operability."

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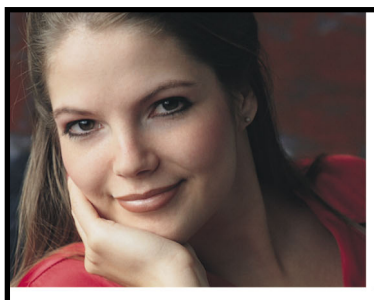
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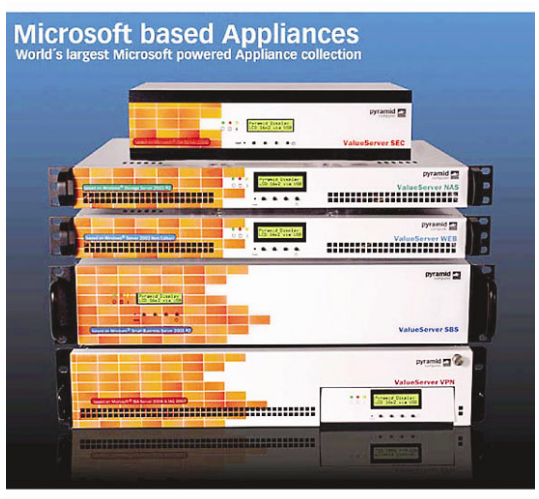
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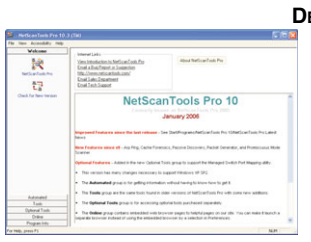
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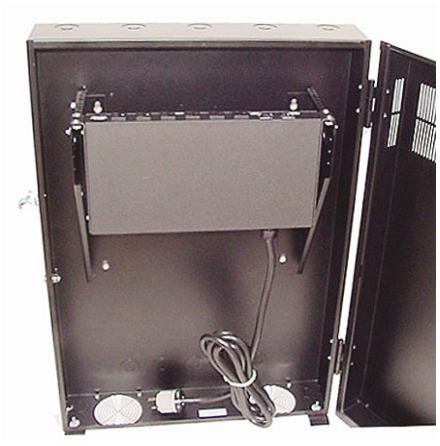
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